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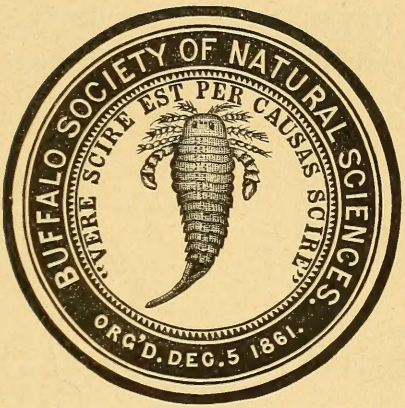
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CONTENTS.

I. Announcement, ... 1

II. List of the Coleoptera Observed and Collected in the Vicinity of Buffalo. By Frank H. Zesch and Ottomar Reinecke, . 2

III. On Certain Fossils of the Water-Lime Group near Buffalo. By Julius Pohlman, ... 17

IV. Notes on the Imitative and Ventriloquial Power of Birds. By E. E. Fish, ... 23

V. New Coleoptera. By John L. Le Conte, M. D., . . . 27

VI. Observations and Notes.— Eudryas unio ; Smerinthus modesta ; Hylesinus trifolii ; Cossus Robiniæ ; Papilio Thoas ; Tyreus Abbotii ; Cypripedium acaule. By David S. Kellicott, . 29

VII. On the Domestication of Some of our Wild Ducks. By Charles Linden, ... 33

VIII. Additional Notes on the Fauna of the Water-Lime Group near Buffalo. By Julius Pohlman, ... 41

IX. Notes on the Larvæ of some Local Pterophoridæ. By David S. Kellicott, ... 47

X. A New Tortricid. By C. H. Fernald, ... 53

XI. Additional List of Coleoptera. By Ottomar Reinecke, . . 55

XII. Notes on the Spongillæ of Buffalo. By Henry Mills, . . 57

XIII. Observations and Notes.—Clathrulina elegans ; Polyzoa ; Paludinella Ehrenbergii, Van Beneden ; Fredericella regina, Leidy ; Plumatella diffusa, Leidy ; Plumatella arethusa, Hyatt ; Plumatella vitrea, Hyatt ; Pectinatella magnifica, Leidy ; Cristatella ophidioidea, Hyatt ; Phlœosinus liminaris, Harris ; Heliothis armiger, Hübn. ; Aletia argillacia, Hubn. ; Ægeria tricincta, Harris. By David S. Kellicott. . . . 61

Catocala amatrix, Hübn. ; Darapsa versicolor, Clem. By Ph. Fischer, ... 62

Cardinalis virginianus. By Charles Linden, . . . 63

XIV. The Plants of Buffalo and its Vicinity. By David F. Day, . 65

XV. General Index, ... 281

N. 19..

BULLETIN

OF THE

BUFFALO SOCIETY OF NATURAL SCIENCES.

VOLUME IV.

ANNOUNCEMENT.

The Committee on Publication takes pleasure in announcing that the publication of the Bulletin of the Buffalo Society of Natural Sciences has been resumed by the issue of this No. 1 of Vol. IV. The committee entertain the hope that the regular appearance of successive numbers and volumes may not be again seriously interrupted or delayed.

The publication of memoirs, lists and descriptions, will be continued as heretofore; in addition, it is proposed to record more fully than in previous volumes, brief notes and observations by the members of the Society; it is believed that such records will not make the Bulletin less valuable to Naturalists in general, but will increase its usefulness among our own observers, and thus aid more decidedly in securing the ends for which the Society was organized —the progress of science, particularly the natural history of the vicinity of Buffalo.

The committee for the Society desire to express sincere thankfulness to the various societies and publishers whose memoirs and periodicals have been sent regularly, while ours has not for so long time appeared in exchange.

FEB 5 1904

List of the Coleoptera Observed and Collected in the Vicinity of Buffalo.

By Frank H. Zesch and Ottomar Reinecke.

The materials for the appended check list of the Coleoptera of Western New York, were collected by us in the vicinity of Buffalo, within a radius not exceeding fifteen miles. The entire labor embraces a period of nearly fourteen years, during which time all leisure hours were exclusively devoted to the study, accumulation and exchange of the many different interesting species peculiar to this neighborhood. The full life history of several species has also been made during the same time the object of special investigation, the results of which we hope to communicate from time to time to those interested in the same field of labor. A glance at the list itself and its quantitative enumeration of the orders and species most largely represented, obviates all special comments upon geographical distribution by affording instant means of comparison with other localities under the same climatic conditions. The specific richness of the local flora exerts, in all probability, here as elsewhere, its influence upon the animal life, depending for its existence upon such intervention.

Sincerely trusting that the completion of similar compilations from other points, wherever scientific observation is fostered, may be witnessed, we submit this unpretentious beginning to all friends of natural history.

CICINDELIDÆ.

Cicindela 6-guttata, *Fab.*
limbalis, *Kl.*
purpurea, *Oliv.*
ancocisconensis, *Harr.*
vulgaris, *Say.*
12-guttata, *Dej.*
repanda, *Dej.*
hirticollis, *Say.*
punctulata, *Fab.*

CARABIDÆ.

Omophron americanum, *Dej.*
tesselatum, *Say.*
Elaphrus ruscarius, *Say.*
Blethisa quadricollis, *Hald.*
Nebria pallipes, *Say.*
Eschscholtzii, *Men.*
Calosoma scrutator, *Fab.*
Willcoxi, *Lec.*
frigidum, *Kirby.*

Calosoma calidum, *Fab.*
Carabus limbatus, *Say.*
serratus, *Say.*
vinctus, *Web.*
Cychrus lecontei, *Dej.*
viduus, *Dej.*
Scarites subterraneus, *Fab.*
Dyschirius globulosus, *Say.*
sphaericollis, *Say.*
Ardistomis viridis, *Say.*
Clivina impressifrons, *Lec.*
cordata, *Putz.*
Schizogenius lineolatus, *Say.*
ferrugineus, *Putz.*
Brachynus perplexus, *Dej.*
ovipennis, *Lec.*
conformis, *Dej.*
cyanipennis, *Say.*
alternans, *Dej.*
fumans, *Fab.*
similis, *Lec.*
cordicollis, *Dej.*
Galerita janus, *Fab.*
Casnonia pennsylvanica, *Linn.*
Plochionus timidus, *Hald.*
Loxopeza grandis, *Hentz.*
atriventris, *Say.*
Lebia viridis, *Say.*
pumila, *Dej.*
pleuritica, *Lec.*
viridipennis, *Dej.*
axillaris, *Dej.*
ornata, *Say.*
fuscata, *Dej.*
Dianchomena scapularis, *Dej.*
Aphelogenia fuscata, *Lec.*
Tetragonoderus fasciatus, *Hald.*
Dromius piceus, *Dej.*
Metabletus americanus, *Dej.*
Cymindis reflexa, *Lec.*
pilosa, *Say.*
americana, *Dej.*
Pinacodera limbata, *Dej.*
Callida viridipennis, *Say.*
punctata, *Lec.*
Calathus gregarius, *Say.*
Platynus hypolithus, *Say.*
angustatus, *Dej.*
pusillus, *Lec.*
tenebricosus, *Gemm.*
sinuatus, *Dej.*
extensicollis, *Say.*
viridis, *Lec.*
decorus, *Say.*
anchomenoides, *Rand.*
collaris, *Say.*
melanarius, *Dej.*
cupripennis, *Say.*
affine, *Kirby.*
punctiformis, *Say.*
Platynus nutans, *Say.*
ruficornis, *Lec.*
picipennis, *Kirby.*
lutulentus, *Lec.*
octopunctatus, *Fab.*
maculicollis, *Dej.*
variolatus, *Lec.*
stigmosus, *Lec.*
placidus, *Say.*
obsoletus, *Say.*
Olisthopus micans, *Lec.*
Pterostichus adoxus, *Say.*
honestus, *Say.*
stygicus, *Say.*
chalcites, *Say.*
lucublandus, *Say.*
mutus, *Say.*
adstrictus, *Dej.*
Luczotti, *Dej.*
erythropus, *Dej.*
Lophoglossus strenuus, *Lec.*
scrutator, *Lec.*
Amara avida, *Say.*
arenaria, *Lec.*
angustata, *Say.*
impuncticollis, *Say.*
fallax, *Lec.*
obesa, *Say.*
musculus, *Say.*
Badister pulchellus, *Lec.*
ferrugineus, *Dej.*
Diplochila laticollis, *Lec.*
major, *Lec.*
Dicaelus dilatatus, *Say.*
crenatus, *Lec.*
ovalis, *Lec.*
elongatus, *Dej.*
teter, *Bon.*
Anomoglossus pusillus, *Say.*
Chlaenius aestivus, *Say.*
erythropus, *Germ.*
fuscicornis, *Dej.*
laticollis, *Say.*
lithophilus, *Say.*
sericeus, *Forster.*
prasinus, *Sej.*
cordicollis, *Kirby.*
solitarius, *Say.*
nemoralis, *Say.*
pennsylvanicus, *Say.*
tricolor, *Dej.*
vafer, *Lec.*
tomentosus, *Say.*
Atranus pubescens, *Dej.*
Lachnocrepis parallelus, *Say.*
Oodes fluvialis, *Lec.*
americanus, *Dej.*
cupraeus, *Chand.*
Geopinus incrassatus, *Dej.*
Cratacanthus dubius, *Beauv.*

Agonoderus lineola, *Fab.*
pallipes, *Fab.*
partiarius, *Say.*
pauperculus, *Dej.*
Anisodactylus rusticus, *Dej.*
nigrita, *Dej.*
puncticollis, *Chd.*
discoideus, *Dej.*
baltimorensis, *Say.*
sericeus, *Harris.*
Amphasia interstitialis, *Say.*
Anisotarsus terminatus, *Say.*
Brandycellus autumnalis *Say.*
badiipennis, *Hald.*
atrimedius, *Say.*
rupestris, *Say.*
neglectus, *Lec.*
Selenophorus iripennis, *Say.*
Harpalus erraticus, *Say.*
viridiaeneus,, *Beauv.*
caliginosus, *Fab.*
faunus, *Say.*
pennsylvanicus, *Dej.*
compar, *Lec.*
erythropus, *Dej.*
spadiceus, *Dej.*
herbivagus, *Say.*
gravis, *Lec.*
Stenolophus conjunctus, *Say.*
ochropezus, *Say.*
dissimilis, *Dej.*
carus, *Lec.*
Patrobus longicornis, *Say.*
Bembidium punctatostriatum, *Say.*
impressum, *Fab.*
paludosum, *Sturm.*
nitidum, *Kirby.*
chalceum, *Dej.*
concolor, *Kirby.*
Kuprianovi, *Mann.*
fugax, *Lec.*
rupestre, *Dej.*
plagiatum, *Zimm.*
partruele, *Dej.*
variegatum, *Say.*
rapidus, *Lec*
versicolor, *Lec.*
frontale, *Lec.*
quadrimaculatum, *Linn.*
Tachys proximus, *Say.*
scitulus, *Lec.*
laevus, *Say.*
nanus, *Gyll.*
flavicanda, *Say.*
vivax, *Lec.*
incurvus, *Say.*
pulchellus, *Lec.*

HALIPLIDÆ.

Haliplus fasciatus, *Aube.*
Haliplus triopsis, *Say.*
ruficollis, *Dej.*
immaculicollis, *Harr.*
longulus, *Lec.*
Cnemidotus 12-punctatus, *Say.*

DYTISCIDÆ.

Hydroporus inaequalis, *Fab.*
convexus, *Aube.*
impressopunctatus. *Dej.*
nubilus, *Lec.*
lacustris, *Say.*
affinis, *Say.*
rotundatus, *Lec.*
griseostriatus, *Dej.*
consimilis, *Lec.*
sericeus, *Lec.*
undulatus, *Say.*
spurius, *Lec.*
modestus, *Aube.*
dichrous, *Mels.*
signatus, *Mann.*
difformis, *Lec.*
Laccophilus maculosus, *Germ.*
Agabetes acuductus. *Harr.*
Acilius semisulcatus, *Aube.*
fraternus, *Harr.*
Thermonectes basilaris, *Harr.*
Graphoderes liberus, *Say.*
Hydaticus stagnalis, *Fab.*
Colymbetes, sculptilis, *Harr.*
binotatis, *Harr.*
Dytiscus Harrisii, *Kirby.*
fasciventris, *Say.*
hybridus, *Aube.*
Ilybius biguttalus, *Germ.*
Coptotomus interrogatus, *Fab.*
Ilybiosoma bifarius, *Kirby.*
Agabus paralleus, *Lec.*
Gaurodytes taeniolatus, *Harr.*
semipunctatus, *Kirby.*
Lecontei, *Cr.*
aeneolus, *Cr.*
punctulatus, *Aube.*
fimbriatus, *Lec.*

GYRIANDÆ.

Dineutus assimilis, *Aube.*
americanus, *Say.*
Gyrinus confinis, *Lec.*
maculiventris, *Lec.*
analis, *Say.*

HYDROPHILIDÆ.

Helophorus lacustris, *Lec.*
linearis, *Say.*
tuberculatus, *Gyll.*
Hydrochus squamifer, *Lec.*
simplex, *Lec.*

Hydrophilus triangularis, *Say.*
Tropisternus nimbatus, *Say.*
lateralis, *Hb.*
glaber, *Hb.*
Hydrocharis obtusatus, *Say.*
Berosus peregrinus, *Hb.*
striatus, *Say.*
Laccobius agilis, *Aand.*
Philhydrus nebulosus, *Say.*
bifidus, *Lec.*
ochraceus, *Mels.*
cinctus, *Say.*
perplexus, *Lec.*
maculicollis, *Mels.*
fimbriatus, *Mels.*
lacustris, *Lec.*
Hydrobius fuscipes, *Linn.*
globosus, *Say.*
subcupreus, *Say.*
Cercyon nigricollis, *Say.*
fulvipenne, *Mann.*
praetextatum, *Say.*
Cryptopleurum vagans, *Lec.*

STAPHYLINIDÆ.

Falagria partita, *Lec.*
dissecta, *Er.*
venustula, *Er.*
Homalota lividipennis, *Mann.*
Aleochara lata, *Grav.*
bimaculata, *Grav.*
nitida, *Grav.*
Leucoparyphus silphoides, *Linn.*
Coproporus ventriculus. *Er.*
Tachinus memnonius, *Grav.*
frigidus, *Er.*
picipes, *Er.*
fimbriatus, *Grav.*
limbatus, *Mels*
Tachyporus jocosus, *Say.*
chrysomelinus, *Linn.*
Conosoma crassum, *Grav.*
Boletobius cinctocollis, *Say.*
cinctus, *Grav.*
Acylophorus pronus, *Er.*
Quedius capucinus, *Grav.*
Creophilus villosus, *Grav.*
Leistotrophus cingulatus, *Grav.*
Staphylinus capitatus, *Bland.*
maculosus, *Grav.*
vulpinus, *Nordm.*
badipes, *Lec.*
cinnamopterus, *Grav.*
violaceus, *Grav.*
Ocypus ater, *Grav.*
Philonthus cyanipennis, *Fab.*
aeneus, *Rossi.*
blandus, *Grav.*
ventralis, *Grav.*
micans, *Grav.*
Philonthus aterrimus, *Grav.*
Gyrohypnus cephalus, *Say.*
emmesus, *Grav.*
obscurus, *Er.*
Lathrobium grande, *Lec.*
angulare, *Lec.*
Cryptobium bicolor, *Grav.*
pallipes, *Grav.*
cribratum, *Lec.*
Sunius linearis, *Nann.*
longisculus, *Er.*
Paederus littorarius, *Grav.*
Stenus colon, *Say.*
Stenus comma, *Lec.*
juno, *Fab.*
flavicornis, *Er.*
Bledius semiferrugineus, *Lec.*
Plathystethus americanum, *Er.*
Oxytelus sculptus, *Grav.*
Anthophagus brunneus, *Say.*
Olophrum rotundicolle, *Say.*
Trigonodemus striatus, *Lec.*
Anthobium dimidiatum, *Mels.*
Glyptoma costale, *Er.*

PSELAPHIDÆ.

Ctenistes piceus, *Lec.*
consobrinus, *Lec.*
Batrisus monstrosus, *Lec.*
globosus, *Lec.*
Euplectus crinitus, *Brend.*

SILPHÆ.

Silpha marginata, *Fab.*
pustulata, *Hersch.*
orbicollis, *Say.*
velutina, *Fab.*
Peltis surinamensis, *Fab.*
lapponica, *Hb.*
noveboracensis, *Forst.*
marginalis, *Fab.*
americana, *Linn.*
Choleva opaca, *Say.*
Catopomorphus parasitus, *Lec.*
Anisotoma discolor, *Mels.*
dichroa, *Lec.*
Agathidium oniscoides, *Beauv.*

SCYDMÆNIDÆ.

Scydmaenus fossiger, *Lec.*
rasus, *Lec.*
bicolor, *Lec.*

CORYLOPHIDÆ.

Orthoperus glaber, *Lec.*
Sericoderus flavidus, *Lec.*
Sacium obscurum, *Lec.*
fasciatum, *Say.*
lunatum, *Lec.*

SCAPHIIDÆ.

Scaphidium quadriguttatum, *Say.*
Baeocera apicalis, *Lec.*

DERODONTIDÆ.

Derodontus maculatus, *Mels.*

LATRIDIIDÆ.

Conithassa minuta, *Linn.*
Latridius deletus, *Mann.*
serratus, *Payk.*
cavicollis, *Lec.*
pumilus, *Mels.*

DERMESTIDÆ.

Dermestes nubilus, *Say.*
pulcher, *Lec.*
lardarius, *Linn.*
elongatus, *Lec.*
vulpinus, *Fab.*
Attagenus pellio, *Linn.*
megatoma, *Fab.*
Trogoderma ornata, *Say.*
Anthrenus thoracicus, *Mels.*
lepidus *Lec.*
varius, *Fab.*
Orphilus subnitidus, *Lec.*

ENDOMYCHIDÆ.

Lycoperdina ferruginea, *Lec.*
Mycetina perpulchra, *Newm.*
vitiata, *Fab.*
Endomychus biguttatus, *Say.*
Rhanis unicolor, *Ziegl.*
Phymaphora pulchella, *Newm.*
Mycetaea hirta, *Msh.*

TRITOMIDÆ.

Tritoma punctatus, *Say.*
flexuosus, *Say.*
bipustulatus, *Mels.*
pluripunctatus, *Lec.*
Cryptophagus humeralis, *Kirby.*
Mannerheimii, *Cr.*
creceus, *Lec.*
Litargus terraspilotus, *Lec.*
6-punctatus, *Say.*
Typhoea fumata, *Linn.*

SPHINDIDÆ.

Sphindus americanus, *Lec.*

CIOIDÆ.

Cis creberrimus, *Mell.*
fuscipes, *Mell.*

EROTYLIDÆ.

Languria bicolor, *Fab.*
Languria Mozardi, *Latr.*
angustata, *Beauv.*
gracilis, *Newm.*
inornata, *Rand.*
Dacne 4-maculata, *Say.*
Megalodacne fasciata, *Fab.*
heros, *Say.*
Hypodacne punctata, *Linn.*
Ischyrus 4-punctatus, *Oliv.*
Mycotretus sanguinipennis, *Say.*
pulchra, *Say.*
Cyrtotriplax, humeralis, *Fab.*
unicolor, *Say.*
Triplax macra, *Lec.*
thoracica, *Say.*
flavicollis, *Lec.*

ATOMARIIDÆ.

Antherophagus ochraceus, *Mels.*
Cryptophagistes cellaris, *Scop.*
crinitus, *Zimm.*
Tomarus pulchellus, *Lec.*
Atomaria ephippiata, *Zimm.*
Sylvanus advena, *Waltl.*
surinamensis, *Linn.*
planatus, *Germ.*
Telephanus velox, *Hald.*

CUCUJIDÆ.

Catogenus rufus, *Fab.*
Cucujus clavipes, *Fab.*
Laemophlaeus biguttatus, *Say.*
fasciatus, *Mels.*
modestus, *Say.*
testaceus, *Fab.*
ferrugineus, *Crtz.*
convexulus, *Lec.*
Dendrophagus glaber, *Lec.*
Uliota dubius, *Fab.*
truncatus, *Motz.*

BITOMIDÆ.

Bitoma striatus, *Mels.*
opaculus, *Lec.*
planicollis, *Lec.*

COLYDIIDÆ.

Synchytodes quadriguttata, *Say.*
Synchita fuliginosa, *Lec.*
Colydium lineola, *Say.*
Bothrideres geminatus, *Say.*
Cerylon castaneum, *Say.*

RHYSSODIDÆ.

Rhyssodes exaratus, *Ill.*

RHIZOPHAGIDÆ.

Rhizophagus approximatus, *Lec.*

Rhizophagus scalpturatus, *Mann.*
Bactridium nanum, *Er.*
striatum, *Lec.*

TROGOSITIDÆ.

Nemosoma cylindricum, *Lec.*
Alindria cylindrica, *Serr.*
Tenebrioides corticalis, *Mels.*
dubia, *Horn.*
castanea, *Mels.*
laticollis, *Hom.*
bimaculata, *Mels.*
Grynocharis 4-lineata, *Mels.*
Calitys scabra, *Thunb.*
Thymalus fulgidus, *Er.*

NITIDULIDÆ.

Trixagus unicolor, *Say.*
Cercus abdominalis, *Er.*
pennatus, *Murr.*
Brachypterus urticae, *Fab.*
Amartus rufipes, *Lec.*
Conotelus obscurus, *Er.*
Carpophilus niger, *Say.*
brachipterus, *Say.*
Epuraea corticina, *Er.*
rufida, *Mels.*
rufa, *Say.*
helvola, *Er.*
Nitidula bipustulata, *Linn.*
rufipes, *Linn.*
Prometopia 6-maculata, *Say.*
Lobiopa undulata, *Say.*
Omosita colon, *Linn.*
Phenolia grossa, *Fab.*
Stelideta geminata, *Say.*
Cyllodes biplagiatus, *Lec.*
Cryptarcha ampla, *Er.*
strigata, *Fab.*
Pityophagus 4-guttatus, *Fab.*
sanguinolentus, *Oliv.*
confluens, *Say.*

PHALACRIDÆ.

Phalacrus politus, *Mels.*
Olibrus bicolor, *Gyll.*
consimilis, *Msh.*
nitidus, *Mels.*

COCCINELLIDÆ.

Magilla maculata, *DeG.*
Hippodamia Lecontei, *Muls.*
glacialis, *Fab.*
13-punctata, *Linn.*
parenthesis, *Say.*
Coccinella trifaciata, *Linn.*
9-notata, *Hb.*
Cycloneda sanguinea, *Linn.*
Adalia frigida, *Schn.*
bipunctata, *Linn.*
Anatis 15-punctata, *Oliv.*
Mysia pullata, *Say.*
Psyllobyora 20-maculata, *Say.*
Chilocorus bivulnerus, *Muls.*
Brachyacantha ursina, *Fab.*
Hyperaspis lateralis, *Muls.*
proba, *Say.*
bigeminata, *Rand.*
undulata, *Say.*
Scymnus bioculatus, *Muls.*
terminatus, Say.
americanus, *Muls.*
haemorrhous, *Lec.*
collaris, *Mels.*
lacustris, *Lec.*
Coccidula lepida, *Lec.*

CISTELIDÆ.

Cytilus sericeus, *Forst.*
Cistela americanus, *Lec.*
cyclophorus, *Kirby.*
geminatus, *Lec.*
Pettitii, *Horn.*
Kirbyi, *Lec.*
murinus, *Fab.*

PSEPHENIDÆ.

Psephenus Lecontei, *Lec.*

PARNIDÆ.

Helichus lithophilus, *Germ.*
striatus, *Lec.*

ELMIDÆ.

Elmis vittatus, *Mels.*
4-notatus, *Say.*
crenatus, *Say.*
vittipennis, *Zimm.*
Macronychus glabratus, *Say.*
crenatus, *Say.*

HETEROCERIDÆ.

Heterocerus cuniculus, *Kies.*
mollinus, *Kies.*

HISTERIDÆ.

Helolepta fossularis, *Say.*
Hister merdarius, *Hoffm.*
interruptus, *Beauv.*
cognatus, *Lec.*
foedatus, *Lec.*
abbreviatus, *Fab.*
depurator, *Say.*
furtivus, *Lec.*
sedecimistriatus, *Say.*

Hister americanus, *Payk.*
perplexus, *Lec.*
subrotundus, *Say.*
carolinus, *Pk.*
Lecontei, *Mars.*
coarctatus, *Lec.*
attenuatus, *Lec.*
Paromalus aequalis, *Say.*
Saprinus assimilis, *Payk.*
conformis, *Lec.*
fraternus, *Say.*
dimidiatipennis, *Lec.*
Bacanius punctiformis, *Lec.*
Acritus strigosus, *Lec.*

LUCANIDÆ.

Lucanus dama, *Thunb.*
placidus, *Say.*
Dorcus parellelus, *Say.*
Platycerus quercus, *Web.*
depressus, *Lec.*
Ceruchus piceus, *Weber.*
Passalus cornutus, *Fab.*

SCARABÆIDÆ.

Canthon hudsonias, *Forst.*
laevis, *Dr.*
Choeridium histeroides, *Web.*
Copris anaglypticus, *Say.*
minutus, *Dr.*
Onthophagus latebrosus, *Fabr.*
canadensis *Fab.*
Aphodius fimetarius, *Linn.*
granarius, *Linn.*
inquinatus, *Hb.*
bicolor, *Say.*
femoralis, *Say.*
Ataenius gracilis, *Mel.*
stercorator, *Fab.*
Ochodoeus biarmatus, *Lec.*
Odontaeus cornigerus, *Mels.*
Geotrypes splendidus, *Fab.*
semiopacus, *Jek.*
Egeriei, *Germ.*
Blackburnii, *Fab.*
Cloeotus aphodioides, *Ill.*
Nicagus obscurus, *Lec.*
Trox porcatus, *Say.*
erinaceus, *Lec.*
capillaris, *Say.*
scaber, *Linn.*
Hoplia trifasciata, *Say.*
Dichelonycha elongatula, *Schoen.*
linearis, *Gyll.*
albicollis, *Burm.*
Serica vespertina, *Schoen.*
sericea, *Ill.*
trociformis, *Burm.*
Phyllophaga futilis, *Lec.*
Poyllophaga fusca, *Froehl.*
cognata, *Burm.*
balia, *Say.*
villifrons, *Lec.*
Macranoxia variolosa, *Hentz.*
Anomala lucicola. *Fabr.*
Pelidnota punctata, *Linn.*
Cotalpa lanigera, *Linn.*
Chalepus trachypygus, *Burm.*
Ligyrus relictus, *Say.*
Xyloryctes, satyrus, *Fab.*
Euryomia inda, *Linn.*
fulgida, *Fabr.*
Osmoderma eremicolo, *Knoch.*
scabra, *Beauv.*
Gnorimus maculosus, *Knoch.*
Trichius bibens, *Fabr.*
affinis, *Gory.*

BUPRESTIDÆ.

Chalcophora virginiensis, *Dr.*
liberta, *Germ.*
fortis, *Lec.*
campestris, *Say.*
Dicerca divaricata, *Say.*
obscura, *Fab.*
spreta, *Lap.*
manca, *Lec.*
punctulata, *Schoen.*
Poecilonata cyanipes, *Say.*
thureura, *Say.*
Buprestis fasciata, *Fab.*
striata, *Fab.*
Melanophila longiper, *Say.*
fulvoguttata, *Harr.*
Anthaxia cyanella, *Gory.*
viridifrons, *Gory.*
quercata, *Fab.*
Chrysobothris femorata, *Lec.*
floricola, *Gory.*
dentipes, *Ferm.*
6-signata, *Say.*
azurea, *Lec.*
Agrilus ruficollis, *Fab.*
otiosus, *Say.*
bilineatus, *Web.*
fallax, *Say.*
interruptus, *Lec.*
politus, *Say.*
puncticeps, *Lec.*
Taphrocerus agriloides, *Cr.*
Brachys ovata, *Web.*
aerosa, *Mels.*

THROSCIDÆ.

Throscus constrictor, *Say.*
Chevrolati, *Bonv.*
Drapetes geminatus, *Say.*
4-pustulatus, *Bonv.*

ELATERIDÆ.

Tharops obliquus, *Say.*
Deltometopus amoenicornis, *Say.*
Dromaeolus cylindricollis, *Say.*
Fornax orchesides, *Newm.*
Microrrhagus humeralis, *Say.*
Adelocera discoidea, *Web.*
aurorata, *Say.*
marmorata, *Fab.*
obtecta, *Say.*
Lacon rectangularis, *Say.*
Alaus oculatus, *Linn.*
myops, *Fab.*
Cardiophorus cardisce, *Say.*
Horistonotus curiatus, *Say.*
Cryptohypnus abbreviatus, *Say.*
Elater rubricollis, *Hb.*
nigricollis, *Hbst.*
semivittatus, *Say.*
linteus, *Say.*
semicinctus, *Rand.*
vitiosus, *Lec.*
apicatus, *Say.*
luctuosus, *Lec.*
fuscatus, *Mels.*
pedalis, *Cand.*
pullus, *Cand.*
miniipennis, *Lec.*
rubricus, *Say.*
obliquus, *Say.*
protervus, *Lec.*
moereus. *Lec.*
Drasterius dorsalis, *Say.*
Monocrepidius auritus, *Hbst.*
Dicrepidius ramicornis, *Beauv.*
Agriotes mancus, *Say.*
pubescens, *Mels.*
fucosus, *Lec.*
stabilis, *Lec.*
Dolopius lateralis, *Esch.*
pauper, *Lec.*
Melanotus scrobicollis, *Lec.*
fissilis, *Say.*
communis, *Gyll.*
pertinax, *Say.*
Limonius propexus, *Cand.*
Pityobius anguinus, *Lec.*
Athous Brightwelli, *Kirby.*
maculicollis, *Lec.*
cucullatus, *Say.*
scapularis, *Say.*
rufifrons, *Rand.*
discalceatus, *Lec.*
Oestodes tenuicollis, *Rand.*
Sericosomus silaceus, *Say.*
Oxygonus obesus, *Say.*
Corymbites tesselatus, *Linn.*
cylindriformis, *Hbst.*
pyrrhos, *Hbst.*
Corymbites tarsalis, *Mels.*
sulcicollis *Say.*
medianus, *Germ.*
hamatus, *Say.*
propola, *Lec.*
hieroglyphicus, *Say.*
aeripennis, *Kirby.*
inflatus, *Say.*
rotundicollis, *Say.*
Asaphes memnonius, *Hbst.*
melanophthalmus, *Mels.*
Melanactes procerus, *Lec.*

DASCYLLIDÆ.

Eurypogon niger, *Mels.*
Anchytarsus ater, *Guer.*
Dicranopselaphus tarsalis, *Lec.*
Cyphon pallipes, *Lec.*
piceus, *Lec.*
punctatus, *Lec.*
nebulosus, *Lec.*
collaris, *Guer.*
ruficollis, *Say.*
Prionocyphon discoideus, *Say.*
Helodes pulchella, *Guer.*
thoracica, *Guer.*
Eucinetus terminalis, *Lec.*
Ptilodactyla serricollis, *Say.*
elaterina, *Guer.*

LAMPYRIDÆ.

Dictyoptera perfaceta, *Say.*
Calopteron typicum, *Newm.*
reticulatum, *Fab.*
Caenia dimidiata, *Fab.*
basalis, *Newm.*
Eros sculptilis, *Say.*
crenatus, *Germ.*
fraternus, *Rand.*
humeralis, *Fab.*
modestus, *Say.*
mollis, *Lec.*
canaliculatus, *Say.*
Lucidota atra, *Fab.*
Photinus corruscus, *Linn.*
autumnalis, *Mels.*
lacustris, *Lec.*
angulatus, *Say.*
borealis, *Rand.*
ardens, *Lec.*
scintillans, *Say.*
Photuris pennsylvanica, *DeG.*

TELEPHORIDÆ.

Chauliognathus americanus, *Forst.*
Podabrus tricostatus, *Say.*
basilaris, *Say.*
modestus, *Say.*

Podabrus diadema, *Fab.*
rugosulus, *Lec.*
laevicollis, *Kirby.*
Telephorus carolinus, *Fab.*
rectus, *Mels.*
imbecilles, *Lec.*
flavipes, *Lec.*
scitulus, *Say.*
fraxini, *Say.*
rotundicollis, *Say.*
bilineatus, *Say.*
armiger, *Couper.*
Silis percomis, *Say.*

MALACHIDÆ.

Collops 4-maculatus, *Fab.*
Anthocomus Erichsoni, *Lec.*
Pseudebaeus oblitus, *Lec.*
Attalus rufiventris, *Horn.*
Dolichosoma foveicollis, *Kirby.*

CLERIDÆ.

Cymatodera inornata, *Say.*
bicolor, *Say.*
Priocera castanea, *Newm.*
Clerus Nutalli, *Kirby.*
Thanasimus nigripes, *Say.*
rosmarus, *Say.*
thoracicus, *Oliv.*
dubius, *Fab.*
undulatus, *Say.*
nubilus, *Klug.*
sanguineus, *Say.*
Hydnocera humeralis, *Say.*
cyanescens, *Lec.*
pallipennis, *Say.*
verticalis, *Say.*
longicollis, *Ziegl.*
Phyllobaenus transversalis.
Chariessa piloso, *Forst.*
onusta, *Say.*
Cregya vetusta, *Soin.*
oculata, *Say.*
Orthopleura damicornis, *Fab.*
Corynetes rufipes, *Fab.*
ruficollis, *Fab.*
violaceus, *Linn.*

CUPESIDÆ.

Cupes capitata, *Fab.*
concolor, *Westw.*

PTINIDÆ.

Ptinus fur, *Linn.*
Eucrada humeralis, *Mels.*
Sitodrepa panicea, *Linn.*
Trichodesma gibbosa, *Say.*
Hadrobregmus errans, *Mels.*
Hadrobregmus linearis, *Lec.*
Trypopitys sericeus, *Say.*
Hemiptychus gravis, *Lec.*
Protheca puberula, *Lec.*
Caenocara oculata, *Say.*
Ptilinus ruficornis, *Say.*
thoracicus, *Rand.*
Endecatomus rugosus, *Rand.*
Bostrychus bicornis, *Web.*
Amphicerus bicaudatus, *Say.*
Dinoderus porcatus, *Lec.*

SPONDYLIDÆ.

Parandra brunnea, *Fab.*

CERAMBYCIDÆ.

Orthosoma brunneum, *Forst.*
Prionus laticollis, *Drury.*
Tragosoma Harrisii, *Lec.*
Asemum moestum, *Hald.*
Criocephalus agrestis, *Kirby.*
obsoletus, *Rand.*
Dularius brevilineus, *Say.*
Hylotrupes bajalus, *Linn.*
ligneus, *Fab.*
Phymatodes variabilis, *Fab.*
amoenus, *Say.*
dimidiatus, *Kirby.*
Callidium antennatum, *Newm.*
janthinum, *Lec.*
aereum, *Newm.*
Gracilia minuta, *Fab.*
Stromatium pubescens, *Hald.*
Chion cinctus, *Drury.*
garganicus, *Fab.*
Elaphidion rufulum, *Hald.*
mucronatum, *Fab.*
villosum, *Fab.*
parallelum, *Newm.*
unicolor, *Rand.*
cinerascens, *Lec.*
Tylonatus bimaculatus, *Hald.*
Heterachtes quadrimaculatus, *Newm.*
Phyton pallidum, *Say.*
Obrium rubrum, *Newm.*
Callimoxys sanguinicollis, *Oliv.*
Molorchus bimaculatus, *Say.*
Cyllene pictus, *Drury.*
robiniae, *Forst.*
Glycobius speciosus, *Say.*
Calleidos nobilis, *Say.*
Arhopalus fulminans, *Fab.*
Xylotrechus colonus, *Fab.*
sagittatus, *Germ.*
quadrimaculatus, *Hald.*
undulatus, *Say.*
Neoclytus luscus, *Fab.*
muricatulus, *Kirby.*
erythrocephalus, *Fab.*

Clytanthus ruricola, *Oliv.*
Microclytus gazellula, *Hald.*
Cyrtophorus verrucosus, *Oliv.*
Euderces picipes, *Fab.*
Desmocerus palliatus, *Forst.*
Necydalis mellitus, *Say.*
Encyclops coerulus, *Say.*
Stenocorus lineatus, *Oliv.*
Centrodera decolorata, *Harr.*
picta, *Hald.*
Acmaeops directa, *Newm.*
Gaurotes cyanipennis, *Say.*
Bellamira scalaris, *Say.*
Typocerus velutinus, *Oliv.*
lugubris, *Say.*
Leptura emarginata, *Fab.*
subhamata, *Rand.*
lineola, *Say.*
cyanella, *Lec.*
chalybaea, *Hald.*
cap tata, *Newm.*
haematites, *Lec.*
exigua, *Newm.*
subargentata, *Kirby.*
zebra, *Oliv.*
canadensis, *Fab.*
cribripennis, *Lec.*
rubrica, *Say.*
vagans, *Oliv.*
proxima, *Say.*
octonotata, *Say.*
vittata, *Germ.*
sphaericollis, *Say.*
vibex, *Newm.*
Cyrtinus pygmaeus, *Hald.*
Psenocerus supernotatus, *Say.*
Monohammus titillator, *Oliv.*
scutellatus, *Say.*
confusor, *Kirby.*
dentator, *Fab.*
Dorcaschema nigrum, *Say.*
Cacoplia pullata, *Hald.*
Goes tigrinus, *DeG.*
pulcher, *Hald.*
pulverulentus, *Hald.*
debilis, *Lec.*
oculatus, *Lec.*
Acanthoderes decipiens, *Hald.*
Leptostylus aculifer, *Say.*
commixtus, *Hald.*
macula, *Say.*
Sternidius variegatus, *Hald.*
alpha, *Say.*
cinereus, *Lec.*
Liopus signatus, *Lec.*
querci, *Fitch.*
facetus, *Say.*
Lepturges angulatus, *Lec.*
symmetricus, *Hald.*
Hyperplatys aspersus, *Say.*
Hyperplatys maculatus, *Hald.*
Graphisurus fasciatus, *DeG.*
pusillus, *Kirby.*
Acanthocinus obsoletus, *Oliv.*
Dectes spinosus, *Say.*
Hoplosia nubila, *Lec.*
Pogonocherus mixtus, *Hald.*
parvulus, *Lec.*
Ecyrus dasycerus, *Say.*
Eupogonius tomentosus, *Hald.*
vestitus, *Say.*
pauper, *Lec.*
subarmatus, *Lec.*
Oncideres putator, *Thoms.*
Saperda obliqua, *Say.*
calcarata, *Say.*
mutica, *Say.*
candida, *Fab.*
Fayi, *Bland.*
vestita, *Say.*
discoidea, *Fab.*
tridentata, *Oliv.*
lateralis, *Fab.*
puncticollis, *Say.*
moesta, *Lec.*
concolor, *Lec.*
Oberea ruficollis, *Fab.*
amabilis, *Hald.*
basalis, *Lec.*
Tetraopes tetraophthalmus, *Forst.*

SPERMOPHAGIDÆ.

Mylabris rufimanus, *Schh.*
pisi, *Linn.*
obsoletus, *Say.*

CHRYSOMELIDÆ.

Donacia palmata, *Oliv.*
piscatrix, *Lec.*
proxima, *Kirby.*
subtilis, *Kunze.*
pubescens, *Lec.*
flavipes, *Kirby.*
Kirbyi, *Lec.*
Macroplea Melsheimeri, *Lec.*
Orsodachna atra, *Ahr.*
Childreni, *Kirby.*
Zeugophora varians, *Cr.*
Reineckei, *Grote.*
Syneta ferruginea, *Germ.*
Lema trilineata, *Oliv.*
Anomoea laticlavia, *Forst.*
Babia 4-guttata, *Oliv.*
Coscinoptera dominicana, *Fab.*
Exema dispar, *Lec.*
Monachus saponicus, *Fab.*
Cryptocephalus congestus, *Fab.*
formosus, *Mels.*
venustus, *Fab.*

Cryptocephalus ornatus, *Fab.*
viduatus, *Fab.*
guttulatus, *Oliv.*
mutabilis, *Mels.*
4-maculatus, *Say.*
auratus, *Say.*
Griburius larvatus, *Newm.*
Pachybrachys viduatus, *Fab.*
subfasciatus, *Hald.*
tridens, *Mels.*
litigiosus, *Suffr.*
Adoxus vitis, *Linn.*
Xanthonia 10-notata, *Say.*
Heteraspis pubescens, *Mels.*
Glyptoscelis hirtus, *Oliv.*
smaragdulus, *Lec.*
Chrysochus auratus, *Fab.*
Paria 6-notata, *Say.*
4-notata, *Say.*
aterima, *Oliv.*
Colaspis favosa, *Say.*
flavida, *Say.*
praetexta, *Say.*
tristis, *Oliv.*
convexa, *Say.*
puncticollis, *Say.*
Chrysomela clivicollis, *Kirby.*
Rogersii, *Lec.*
10-lineata, *Say.*
juncta, *Germ.*
exclamationis, *Fab.*
suturalis, *Fab.*
elegans, *Oliv.*
scalaris, *Lec.*
philadelphica, *Linn.*
multipunctata, *Say.*
Bigsbyana, *Kirby.*
Gastrophysa polygoni, *Linn.*
cyanea. *Mels.*
Prasocuris varipes, *Cr.*
Phyllodecta vulgatissima, *Linn.*
Plagiodera cochleariae, *Gyll.*
viridis, *Mels.*
Cerotoma caminea, *Fabr.*
Phyllobrotica decorata, *Say.*
discoidea, *Fab.*
Luperus meraca, *Say.*
Diabrotica 12-punctata, *Oliv.*
vittata, *Fab.*
longicornis, *Say.*
Galeruca externa, *Say.*
6-vittata, *Lec.*
cavicollis, *Lec.*
rufosanguinea, *Say.*
Trirhabda virgata, *Lec.*
canadensis, *Kirby.*
Oedionychis gibbitarsis, *Say.*
vians, *Ill.*
miniata, *Fab.*
thyamoides, *Cr.*
Oedionychis quercata, *Fab.*
suturalis, *Fab.*
Disonycha limbicollis, *Lec.*
alternata, *Ill.*
pennsylvanica, *Ill.*
triangularis, *Say.*
collaris, *Fab.*
Graptodera chalybea, *Ill.*
Longitarsus rubidus, *Lec.*
Orchestris vittata, *Fab.*
Aphthona picta, *Say.*
subrufus, *Lec.*
Systena hudsonias, *Fab.*
frontalis, *Fab.*
marginalis, *Ill.*
Orthaltica capolina, *Fab.*
Crepidodera Helxines, *Linn.*
violacea, *Mels.*
atriventris, *Say.*
Epitrix cucumeris, *Harr.*
fuscula, *Cr.*
Psylliodes punctulata, *Mels.*
Odontota rosea, *Web.*
inaequalis, *Web.*
Physonota unipunctata, *Say.*
Coptocycla aurichalcea, *Fab.*
guttata, *Oliv.*

TENEBRIONIDÆ.

Epitragus arundinis, *Lec.*
Phellopsis porcata, *Lec.*
obcordata, *Lec.*
Nyctobates pennsylvanica, *DeG.*
Merinus laevis, *Oliv.*
Upsis ceramboides, *Linn.*
Haplandrus femoratus, *Fab.*
Centronopus calcaratus, *Fab.*
Xylopinus saperdioides, *Oliv.*
rufipes, *Say.*
Tenebrionellus obscurus, *Fab.*
molitor, *Linn.*
castaneus, *Knoch.*
tenebrioides, *Beauv.*
Blapstinus interruptus, *Say.*
metallicus, *Fab.*
Tribolium ferrugineum, *Fab.*
Dioedus punctatus, *Lec.*
Phaleria impressa, *Mels.*
punctulata, *Lec.*
Paratenetus punctatus, *Sol.*
Diaperis hydni, *Fab.*
Hoplocephala viridipennis, *Fab.*
bicornis, *Oliv.*
Platydema excavatum, *Say.*
ruficorne, *Sturm.*
americanum, *Lap.*
subcostatum, *Lap.*
Corticcus parallelus, *Mels.*
thoracicus, *Mels.*
Pentaphyllus pallidus, *Lec.*

Bolilotherus bifurcus, *Fab.*
Bolithophagus corticola, *Say.*
depressus, *Kand.*
Helops micans, *Fab.*
Meracantha contracta, *Beauv.*

ALLECULIDÆ.

Hymenorus obscurus, *Say.*
niger, *Mels.*
punctatissimus, *Lec.*
Pseudocistela brevis, *Say.*
sericea, *Say.*
Isomira quadristriata, *Coup.*
Mycetochares fraterna, *Say.*
tenuis, *Lec.*
binotata, *Say.*
Chromatia amoena, *Say.*
Capnochroa fuliginosa, *Mels.*

LAGRIIDÆ.

Arthromacra aenea, *Say.*

PYROCHROIDÆ.

Pyrochroa flabellata, *Fabr.*
femoralis, *Lec.*
Schizotus cervicalis, *Newm.*
Dendroides canadensis, *Latr.*
concolor, *Newm.*

ANTHICIDÆ.

Stereopalpus Mellyi, *Laf.*
badiipennis, *Lec.*
Corphyra Newmani, *Lec.*
lugubris, *Say.*
fulvipes, *Newm.*
labiata, *Say.*
terminalis, *Say.*
collaris, *Say.*
Macratria murina, *Fab.*
Notoxus anchora, *Hentz.*
bifasciatus, *Lec.*
Anthicus obscurus, *Laf.*
formicarius, *Laf.*
floralis, *Payk.*
cervinus, *Laf.*
granularis, *Lec.*
Xylophilus fasciatus, *Mels.*
basalis, *Lec.*

MELANDRIIDÆ.

Scraptia sericea, *Mels.*
Tetratoma truncorum, *Lec.*
tessellata, *Mels.*
Penthe obliquata, *Fab.*
pimelia, *Fab.*
Synchroa punctata, *Newm.*
Osphya varians, *Lec.*
Emmesa connectens, *Newm.*
Melandrya striata, *Say.*
Prothalpia undata, *Lec.*
Carebara longula, *Lec.*
Spilotus quadripustulosus, *Mels.*
Mystaxis simulator, *Newm.*
Serropalpus striatus, *Hellen.*
Hypulus liturata, *Lec.*
Symphora rugosa, *Hald.*
Hallomenus scapularis, *Mels.*
Eustrophus bicolor, *Say.*
bifasciatus, *Say.*
tomentosus, *Say.*
Orchesia castanea, *Mels.*
gracilis, *Mels.*
Amblyctis praeses, *Lec.*

MORDELLIDÆ.

Anaspis flavipennis, *Hald.*
rufa, *Say.*
Tomoxia inclusa, *Lec.*
Mordella melaena, *Germ.*
scutellaris, *Fab.*
marginata, *Mels.*
lineata, *Mels.*
serval, *Say.*
undulata, *Mels.*
Mordellistena trifasciata, *Say.*
scapularis, *Say.*
cervicalis, *Lec.*
liturata, *Mels.*

MELOIDÆ.

Meloe angusticollis, *Say.*
Macrobasis unicolor, *Kirby.*
Epicauta vittata, *Fab.*
cinerea, *Forst.*
pennsylvanica, *DeG.*

CEPHALOIDÆ.

Cephaloon lepturides, *Newm.*

OEDEMERIDÆ.

Ditylus ceruleus, *Rand.*
Asclera ruficollis, *Say.*
puncticollis, *Say.*

PYTHIDÆ.

Pytho niger, *Kirby.*
americanus, *Kirby.*
Boros unicolor, *Say.*

CURCURLIONIDÆ.

Rhinosimus viridiaeneus, *Rand.*
Eugnamptus angustatus, *Hbst.*
Rhynchites bicolor, *Fab.*
Pterocolus ovatus, *Fab.*
Attelabus analis, *Ill.*
bipustulatus, *Fab.*

Hormorus undulatus, *Uhler.*
Panscopus erimaceus, *Say.*
Amanetis grisea, *Horn.*
Phyxelis glomerosus, *Schk.*
rigidus, *Say.*
Tanymecus canescens, *Say.*
Pandeletius hilaris, *Hbst.*
Cyphomimus dorsalis, *Horn.*
Sitones flavescens, *Allard.*
tibialis, *Germ.*
Ithecerus noveboracensis, *Forst.*
Phytonomus compta, *Say.*
Lepyrus geminator, *Say.*
Listroderes sordidus, *Gyll.*
Listronotus inaequalipennis, *Boh.*
caudatus, *Say.*
appendiculatus, *Boh.*
delumbis, *Gyll.*
sparsus, *Say.*
Macrops solutus, *Boh.*
Hylobius palles, *Hbst.*
stupidus, *Boh.*
Pissodes strobi, *Peck.*
affinis, *Rand.*
Lixus concavus, *Say.*
Erycus puncticollis, *Lec.*
Erirrhinus ephippiatus, *Say.*
Dorytomus muscidus, *Say.*
laticollis, *Lec.*
brevicollis, *Lec.*
Eudalus limatulus, *Lap.*
Anchodemes angustus, *Lec.*
Otidocephalus myrmex, *Hbst.*
americanus, *Chev.*
scrobicollis, *Schk.*
Chevrolatii, *Horn.*
Magdalis armicollis, *Say.*
barbilla, *Say.*
olyra, *Hbst.*
pandura, *Say.*
Lecontei, *Horn.*
Salcis, *Horn.*
Anthonomus quadrigibbus, *Say.*
rubidus, *Lec.*
suturalis, *Lec.*
sycophanta, *Walsh.*
crataegi, *Walsh.*
musculus, *Say.*
Orchestes ephippiatus, *Say.*
rufipes, *Lec.*
niger, *Horn.*
Prionomerus calceatus, *Say.*
Piazorrhinus scutellaris, *Say.*
Gymnetron teter, *Schk.*
Laemosaccus plagiatus, *Fab.*
Conotrachelus juglandis, *Lec.*
nenuphar, *Hbst.*
elegans, *Boh.*
crataegi, *Walsh.*
posticatus, *Say.*
Conotrachelus anaglypticus, *Fahr.*
Analcis foveolatus, *Say.*
nivosus, *Lec.*
Rhyssematus lineaticollis. *Say.*
palmacolles, *Say.*
Acamptus rigidus, *Lec.*
Tyloderma aereum, *Say.*
faveolatum, *Say.*
Cryptorhynchus bisignatus, *Say.*
obliquus, *Say.*
parochus, *Hbst.*
obliquefasciatus, *Boh.*
fuscatus, *Lec.*
fallax, *Lec.*
Piazurus oculatus, *Say.*
Acoptus suturalis, *Lec.*
Tachygonus tardipes, *Lec.*
Mononychus vulpeculus, *Boh.*
Coeliodes acephalus, *Say.*
curtus, *Say.*
Ceutorhynchus rapae, *Gyll.*
septentrionalis, *Gyll.*
ergrini, *Fab.*
Rhinoncus pyrrhopus, *Boh.*
Baris strenuus, *Lec.*
Pseudobaris nigrina, *Say.*
Madarus undulatus, *Boh.*
Centrinus scutellum-album, *Say.*
Balaninus nasicus, *Say.*
rectus, *Say.*
Cossonus corticola, *Say.*
coraticus, *Say.*
impressifrons, *Boh.*
plataleo, *Say.*
Calandra remotepunctata, *Gyll.*
linearis, *Gyll.*
Dryophthorus corticalis, *Say.*
Hormiscus saltator, *Lec.*
Allandrus bifasciatus, *Lec.*
Piezocorynus mixtus, *Lec.*
Hylurgus pinifex, *Fitch.*
Apion rostrum, *Say.*
Sphenophorus melanocephalus, *Fab.*
ochreus, *Lec.*
pertinax, *Oliv.*
vomerinus, *Lec.*
Anleter ater, *Lec.*
Thysanocnemis fraxini, *Lec.*
Piazorhinus pictus, *Lec.*
Onychylis nigrivostris, *Lec.*
Eusphyrus Walshii, *Lec.*

SCOLYTIDÆ.

Stenoscelis brevis, *Boh.*
Monarthrum fasciatum, *Say.*
mali, *Fitch.*
Pityophthorus materiarius, *Fitch.*
Trypodendron politus, *Say.*
Xyleborus pyri, *Harr.*
caelatus, *Zimm.*

Xyleborus celsus, *Eich.*
Tomicus calligraphus, *Germ.*
pini, *Say.*
Micracis aculeatus, *Lec.*
Hylesinus opaculus, *Lec.*
pruinosus, *Eich.*
Carphoborus bicristatus, *Lec.*
Dendroctonus tenebrans, *Lec.*
Dendrocinus aculeatus, *Say.*

Araeocerus fasciculatus, *Woll.*

ANTHRIBIDÆ.

Cratoparis lunatus, *Fab.*
Tropideres fasciatus, *Oliv.*
Brachytarsus variegatus, *Say.*

BRENTHIDÆ.

Eupsalis maxillosus, *Oliv.*

On Certain Fossils of the Water-Lime Group near Buffalo.

BY JULIUS POHLMAN.

1. *Pterygotus Buffaloensis* n. sp. The specimen consists of an almost complete swimming-foot of this rare crustaceæ. (Fig. 1.) The maxilliped has a breadth of 1⅛ inches, length of the whole specimen 6¼ inches. The surface of the first and the edges of the second, third, fourth and fifth joint are covered with small, rounded, scale-like processes, the other parts are finely granulose. Professor Huxley gives to his figure of Pterygotus, reproduced by Profess or Hall, in the *Palæontology of New York*, Vol. III., 424, a seven-jointed, swimming foot. But this specimen shows the seven joints down to the palette very distinct, and another fragment of the same species has all the joints from the second to the seventh incl. entire, together with the soldered suture line (Fig. 2.), which is so plainly seen in the *Eurypterii*. We can, therefore, conclude that either Professor Huxley's figure is wrong, or that the English Pterygotus differs from the American genus, the number of joints in the swimming-feet of the latter corresponding with those of Eurypterus.

× ½

Fig. 1

× ½

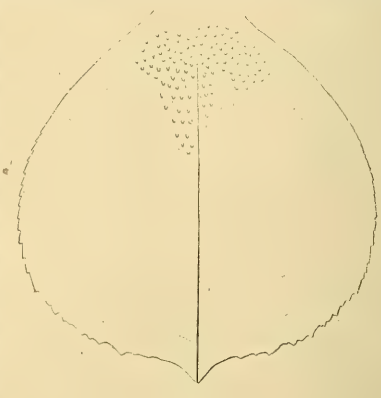
Fig. 2

Another fragment, which I for the present refer to the same species, consists of one of the chelate antennæ. (Fig. 3.) The articulating extremity is well defined, widening a little towards the place where

Fig. 3

the free ramus was inserted, and gradually narrowing in a slightly curved line towards the end. At the end there is a small, stout, triangular tooth, standing at right angles to the ramus; the outer third of the inner edge has a number of small, irregular, upright teeth; the second third has eight teeth of different sizes, ranging from 7-16 of an inch to less than 1-16 of an inch, inclined at an angle of about forty-five degrees; the inner third of the ramus is smooth. The larger teeth are finely serrated on the inner edge; surface smooth, length of specimen 2⅝ inches, greatest width 7-16 of an inch.

2. A detached impression of a rounded appendage found in the water-lime, has been in the museum of the society for several years; (Fig. 4), another fragment found last year preserves besides this appendage the last eight articulations of the abdomen, thus proving it beyond doubt the tail of a water-lime crustacean. It is oval and has a distinct ridge running down in the middle. The interior portion of the specimen has its surface covered with small, pointed, scale-like processes, quite distinct from each other; the posterior two-thirds of both margins are irregularly serrated, the largest tooth occupying the middle into which the dividing ridge terminates. This specimen is 3½ inches long and 2¾ inches wide; but a fragment of this tail has been found, which, when restored, has a length of 6¼ inches, and



× ½

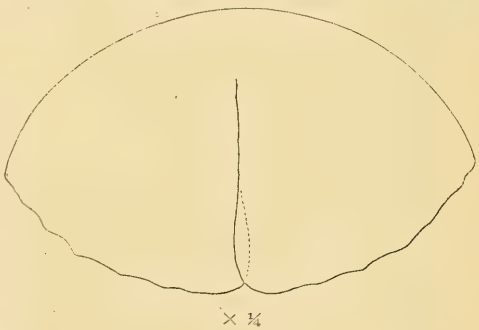
Fig. 4

a width of 5 inches, thus indicating an animal of enormous size.

Here the interesting query suggests itself, may this not be the tail of the American Pterygotus? The largest size would well correspond with the fragments of *P. Cummingsi*, Grote and Pitt (B. B. S. N. S., Vol. III., 18), and the bilobed tail, figured by Professor Huxley for the English genus, does not differ sufficiently from our specimens to contradict such an assumption.

Several detached postoral plates of Pterygotus have been found, the largest of which measures 2⅝ inches in length and 1⅝ inches wide.

3. *Ceratiocaris grandis*, n. sp. All fragments of this genus hitherto described have been more or less crushed or broken. This specimen, found in the same beds which yielded the Pterygotus, consists of a complete carapace, which differs in its proportions from any other species. The whole impression is very distinct, and shows well the two valves. (Fig. 5.) The carapace is semicircular between the anterior ends, nearly twice as wide as long, measuring 9½ inches in width by 5¼ inches in length; the dorsal line is nearly as semicircular as the anterior margin, and lightly scalloped. The two valves overlap each other about a quarter of an inch, and the division is visible for more than two-thirds of the length of the carapace. Surface finely granulose. No ocular spots are visible.



× ¼

Fig. 5

4. A specimen of *Buthrotrepis Lesquereux*, Grote and Pitt (B. B. S. N. S., Vol. III., 88), found last summer, adds a little to the knowledge of the structure of this Fucoid (Fig. 6); while the type exhibits a number of branches irregularly mingled together, this specimen shows the branches spread out.

5. An examination of six more or less perfect specimens of *Eurypeterus pachycheirus* proves that the figure of that species, as given by Professor Hall in the *Palæontology of New York*, Vol. III., Plate 82

is not quite correct. In all my specimens the scaly markings of the surface are more rounded than pointed, and the elevated band on the anterior margin of each joint is dentate, not serrated. (Fig. 7.)

× ½ Fig. 6

Two almost complete specimens measure eight inches in length by 2¾ inches the greatest width; carapace semicircular, anteriorly and laterally margined by a slightly elevated rim; length to width as two to three; eyes lunate, convex; no markings visible. The width across the base of the carapace is smaller than across the thorax. The first five segments have their lateral margins rounded, the others extend in angles at the lateral edges. The last four abdominal joints are longer than the others, which are six or seven times as wide as long. The tail is a strong, triangular spine, serrated at the angles. One specimen shows the rows of little scale-like elevations on the back very plain, six rows on the first three joints, four rows on the next four, and two rows on the remaining abdominal joints. The other scaly surface markings are seen on the back part of the carapace and all over the body. The swimming-feet in these specimens agree with the above quoted figure. The postoral plate is oval, the greatest width above the middle. The anterior feet are missing or broken in all my specimens.

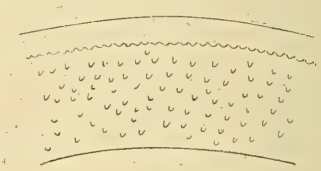


Fig. 7

A comparison of the number of species found last summer indicate that *E. pachycheirus* was the most abundant.

6. The central thoracic appendage of *Dolichopterus macrocheirus* is very plain in the specimen in the museum. Extending to the fifth joint of the body, it shows the triangular prolongation of the first joint adjacent to it over the next joint, and terminates in

slender processes like those figured by Professor Hall for *E. lacustris* in the *Palæontology of New York*, Vol. III., Plate 81, Figs. 6 and 7.

7. All the above described fossils have been collected from the water-lime group near Buffalo, on the grounds of the Union Cement Company, Mr. U. Cummings, superintendent, to whose liberality the museum is indebted for a large number of specimens. Besides these, *Eurypterus remipes*, *lacustris*, *robustus* and *dekayi* have been recently collected from the same locality. All can be easily identified by the excellent figures given in Professor Hall's works. The only one of all hitherto described Eurypterii from the water-lime group which is missing in our collection is *Eurypterus pustulosus*, Hall, of which a single carapace has been found. A comparison of the *Eusarcus scorpionis*, Grote and Pitt (B. B. S. N. S., Vol. III., 1), with a large number of Eurypterii, shows that there does not exist difference enough to admit the formation of a new genus; and I am inclined to think that the finding of more complete specimens will eventually show that *Eusarcus scorpionis* is *Eurypterus pustulosus*. The careful study of all the material from the water-lime group in the museum enables me to make a few corrections to the published description of *Eusarcus scorpionis*.

The type is not the ventral, but the dorsal side, with the exception of the carapace. The specimen is remarkably contorted, the whole body curved backward, a position not found in any other specimen. The shape of the carapace cannot be given because it is broken off along the line of the cephalic shield in both our specimens; but there is no disconnection of the cephalothoracic portion and the body, a fact clearly demonstrated by the chipping away of some of the overlaying matrix. The impression of one swimming-foot is not very distinct, but seems to accord more with *Dolichopterus* than with *Eurypterus* in structure, although it is not quite as long. The narrowing of the thoracic segments is not so remarkable after the matrix has been removed and a part of the carapace is visible; there is certainly no more difference in the shape of the body between this species and *Eurypterus dekayi*, than there is between the latter and *E. remipes*. The widening of the terminal segment described is due to the careless cutting away of the stone in which it was imbedded; the other specimen of the same species shows no

such enlargement, but ends in a gradually tapering broken tail joint, which corresponds with the spine of *Eurypterus* when broken off near the beginning of its triangular portion.

In spite of all efforts made I have not been able to obtain any specimen of *Eusarcus* which would help to settle this question definitely; the species appears to have been as rare as *Pterygotus*, for only two specimens have hitherto been found, both of which are in the museum.

The cuts for this paper have been made and presented by Mr. Henry Chandler, of this city.

Imitative and Ventriloqual Power of Birds.

BY E. E. FISH.

Birds not only have their own songs, or those peculiar to their species, but many of them have, at least in part, the songs of other kinds. It is well known that the canaries can be taught to sing art music very accurately. They also frequently take up the songs of other birds caged near them. This imitative power of wild birds, with the exception of the mocking-bird, seems to be comparatively unobserved. Burroughs is the only naturalist that has made mention of it, and he has noticed only one or two instances that have come under his observation.

The song-sparrow (*Melospiza melodia*), perhaps oftener than any other bird catches certain notes or strains of those with which it is associated.

Last summer, in a private park in the city, I heard the peculiar note of a chewink or towhee bunting (*Pipilo erythrophthalmus*), in a tree near by; and, at the same time, the clear note of a song-sparrow from the same tree: being surprised to hear the notes of the former in the city, knowing it to be a very shy bird, generally making its home in bushy pasture-fields, I approached the tree to listen more attentively, and, each time, just at the middle of the sparrow's song, the high, quaint note of the towhee could be heard. Soon I discovered that the sparrow sang both his own and the other's song. Since then I have heard two others that ended their songs with that of the chewink.

Another sparrow at Forest Lawn was observed to close every song with the high, sharp notes of the peetweet, a water-bird that can generally be seen in the same locality. At least on a dozen different visits to the locality, in June and July, I heard the same bird, closing each song with the peetweet calls.

I have heard a robin intersperse the notes of a phebe bird with each song, with such exactness as to deceive any one who might not see the bird while singing. Another robin that sang during many mornings on Franklin street, last summer, had half a robin's song

and half that of the oriole. It was a most delightful medley, and many mornings I walked several blocks out of my way to enjoy it.

At Portage, my attention was called to the song of a red-eyed vireo (*Vireo olivaceous*) that had caught the whistle of a quail; his cheerful, almost incessant song of a dozen notes uttered interrogatively, was changed at intervals to exactly resemble the clear whistle of "Bob White," of the quail. So perfect was it that several whose attention was called to it would not believe that the little song-bird uttered it, until I pointed out to them the small, ashen-colored warbler, evidently the author. For many days the same sweet singer delighted its listeners. Its own song is a very agreeable one, and it is a persistent singer, making music, not only on the soft, sweet mornings of June, but during all the hot, sultry days of summer, when the songs of most other birds are hushed. The following season I heard the same bird in the same grove, and should have recognized it among a thousand. Probably, when young and commencing to sing, these birds that have caught notes and strains of others, were in hearing of those which they imitate.

Three species of birds utter the word "Phebe" quite distinctly; the American gold-finch, phebe-bird, and chickadee; the first, in a plaintive tone, generally when shivering with the cold of early autumn, or while trying to escape the sparrow-hawk. The phebe repeats it as its daily song, keeping time with the oscillation of its long tail, while the chickadee only utters it as its love-song when mating, and then it is one of the clearest, sweetest whistles to be heard in the woods.

Birds of the same species vary much in quality and quantity of song; the wild ones even as much as the canary and mocking-bird. This is more frequently noticed in the song-sparrow and robin; but those who delight in the songs of the Sylvias—the thrushes and warblers of the woods—better appreciate this difference. Some wood-thrushes sing as if they had colds; others only short snatches of a song, seeming never quite able to complete the strain; while most of them send out such clear and silvery notes, so exquisitely modulated, as to stamp them as Nature's sweetest musicians.

Burroughs has noticed the fact that the bobolink sings his best and brightest songs in the meadow regions of eastern and central

New York; while in some localities he is almost silent. Many of our best singers do not sing at all in the lower latitudes, and during their sojourn south are as silent as the cherry-birds, only lisping or chirping notes, as unmusical as those of the English sparrow.

Of the birds that remain longest with us, some of the earliest broods commence singing in the later summer or early autumn, before migrating for the winter; these young singers often deceive the listener, who believes their songs to be those of other birds. Some of the young robins chirrup feebly; the song-sparrow often gets about half his song; the little yellow-bird sings much like the young canary, while the newly-fledged cat-bird will execute his song tolerably well. It is interesting to observe these young birds try to imitate the little snatches of song of the parent bird.

The young of birds that come late and leave early in the season, such as the vireos, warblers, grosbeaks, bobolinks and thrushes, give no sign of their musical capabilities until the following year; and even if caged and kept here during the winter, will remain nearly silent until the time for mating.

Many birds possess considerable powers of ventriloquism. The mellow notes of the cuckoo will sometimes appear to be a furlong away, when, in fact, the bird may be in a tree not a rod distant. Although the thrushes usually sing from low perches, the sound seems to come from tree-tops. The vesper sparrow (*Fringilla graminea*), will so modulate his song that one at first thinks it in a distant field, when it is on a fence-stake by the road-side. The field-sparrow (*Spizella pusilla*), has often deceived me in the same way. Cat-birds often sing their loud, voluble songs; but occasionally they indulge in low, soft warbles, as sweet and tender as those of the vireos. The song of a robin will often appear to be at a great distance when very near, or to be near when it is far off. The oven-bird or golden-crowned thrush (*Seiurus aurocapillus*), has a remarkable way of throwing its sharp, ringing notes to a great distance, and will often startle one with the emphasis of his rapid, vibrating song, each note shot out with a startling, explosive force, which leads the listener to expect a large bird almost within reach; when, perhaps, the little speckled-breasted, yellow-crowned singer, the smallest of the thrushes, is many rods away.

When birds sing to attract attention, they usually make full use of their vocal powers; but when they sing to their sitting mates, they modulate their notes so as only to reach the object of their solicitude.

New Coleoptera.

BY JOHN L. LE CONTE, M.D.

[PLATE 1, FIGS. 1–4.]

Elaphidion, SERV.

E. imbelle, Lec., n. sp. (Fig. 1.) Elongate, piceo-ferruginous, shining, strongly punctured, thinly clothed with long, erect, flying hairs. Head densely punctured; prothorax (♀) scarcely longer than wide, rounded on the sides in front, narrowed and subsinuate near the base; coarsely punctured, with the usual smooth callosities, of which the two anterior ones are round and rather prominent. Scutel punctulate, pubescent. Elytra squarely truncate at base, scarcely wider than the widest part of the prothorax, parallel on the sides, rounded and slightly truncate at tip; punctures not dense, a little smaller at tip than at base. Antennæ a little longer than the body, slender, fringed with flying hairs, which become gradually less numerous on the eighth and following joints; third and fourth joints very feebly flattened on the upper side; fourth joint somewhat shorter than the fifth. Metasternum with distinct odoriferous pores; thighs rather strongly clavate, finely punctulate, with sparse setigerous punctures; length 17.3 mm.

One ♀; Poway, Cal., kindly given me by Mr. O. Reinecke, of Buffalo, N. Y. This species belongs to Div. C., Lec., New Spec. Col. 183.

Oeme, NEWM.

Oe. gracilis, Lec. n. sp. (Fig. 2.) Elongate, similar in form to *Oe. rigida*, piceous, antennæ and legs dull ferruginous. Head with a strongly impressed median line, coarsely punctured; prothorax (♀) longer than wide, rounded on the sides, narrower at base than at tip, widest just behind the middle, then rapidly narrowed to the base, which is narrower than the front; disc finely densely punctured, with an impressed dorsal line from the middle of the base. Elytra strongly punctured, more finely towards the tip, sparsely clothed with rather long pubescence, each with a feeble discoidal

costa; base truncate, sides parallel, tip rounded. Antennæ (♀) longer than the body, fringed with long, flying hairs; first joint very coarsely punctured; thighs moderately clavate, densely rugosely punctured; length 12 mm.

One ♀; Poway, Cal., kindly given me by Mr. O. Reinecke, of Buffalo, N. Y.

Myodites, Latr.

M. Zeschii, Lec., n. sp. (Figs. 3 and 4.) Black; head very densely punctulate; front flat; vertex pubescent with erect hair, acutely conical and very prominent; prothorax densely punctulate; scutel smooth, shining; elytra opake, densely rugose and punctulate, dull fulvous, with a large humeral spot and posterior transverse blotch, blackish; beneath densely and finely punctured; hind tarsi with first joint as long as the others united; slightly compressed; not distinctly emarginate at tip; length 6.5 mm.

♂ antennæ smoky testaceous; front and middle legs dull testaceous; middle tibiæ and hind legs piceous; middle of first three ventral segments slightly yellowish.

One ♂ found at Buffalo, N. Y., was kindly given me by Mr. F. Zesch, to whom I take pleasure in dedicating it. The wings are unusually dark, and the dusky band occupies nearly the apical third of the surface.

Observations and Notes.

Eudryas unio.—I obtained July 22d, 1880, twenty or more examples of the larvæ of this moth, found feeding on *Oenotheria biennis* growing in the Buffalo Park. A few were taken at the same time and place upon *Epilobium coloratum.* By August 1st all had become pupæ. For two or three days before transforming they busied themselves at boring the weathered pine boards of the feeding-box; finally they went into the earth or beneath the leaves in the box, and changed.

August 29th, a few imagos appeared. The majority, however, passed the winter as pupæ, the moths appearing in June. (See *Lintner's Ent. Cont.*, No. III., 117.) D. S. KELLICOTT.

Smerinthus modesta.—One larva was taken on *Populus tremuloides*, September 11, 1880. The following brief description is from my note-book: Length, 3.3 in.; robust, attenuated anteriorly. Color, pale green, granulated over entire body with white; the lateral stripes, the first and sixth faint, the seventh, much broader and brighter than any other one, it terminates in the minute, black-tipped caudal horn. Head of the usual triangular form having conspicuous white lateral lines. Feet roseate, spiracles of the same hue.

The larva disappeared in the earth of box, September 13th; on the 19th the roof of the cell fell in, uncovering the there contracted caterpillar; on the 20th the

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appeared. Length, 1.95 in.; diameter, .65 in.; black, shagreened; spiracles, except the first and eighth, fulvous within the rather narrowly elliptical rings. Cremaster a rough triangular process, flattened horizontally; no spines or crochets. D. S. K.

Hylesinus trifolii.—I found this clover-root borer quite abundant in the roots *T. pratense* about Buffalo in June, 1880. At this time, May, 1881, in some fields three-fourths, at least, of the roots are attacked; in some cases the clover is "run out," apparently by the beetle. Mr. Riley gave an account of its habits, and proved it to be

distinct or different from *H. opaculus* in the *Report of the Department of Agriculture* for 1878, page 248.

Mr. Tobias Witmer informs me that "last year this beetle occasioned much damage to the clover in Humberstone, Ont., Lancaster, and other places in Erie county."

It is likely to prove a serious enemy to agriculture in this locality.

D. S. K.

Cossus robiniæ.— I am able to add, so far as I know, two new food plants harboring this moth. In the spring of 1880 I obtained larvæ and later pupæ and imagos from the trunks of *Populus candicans* in the vicinity of Buffalo. In April last I found the larvæ also in the willow (*S. nigra*) in the same locality; from these the moths are now appearing, July 4th. Numerous examples of caterpillars were taken from both trees. Comparing these with Fitch's description (*Fifth Report*), I find no particular differences, except that the red ones have, as Harris says, "the upper part of the first three rings brown and hard;" while Fitch mentions the first only as thus covered. Again, Harris (*Ins. Inj. to Veg.*) says these caterpillars are "soft and whitish," which is not so until after the last moult; then not the first three rings, but the first only, is brown above. These larvæ are good travelers. A willow log, three feet in length, containing at least twenty-five of different sizes, was brought in. After it became dry, in June, the larvæ left it, and wandered to considerable distances from the starting-place. One was found that is now boring with apparent satisfaction in the trunk of a plumb tree; besides, they were not uncommonly found under the rough bark of the poplars at some distance from their burrows. I have repeatedly captured them while thus on the outside of the trees. In several instances I have found cast larval skins in the crevices. Those from the willow and poplar appear as moths from ten days to two weeks later than those from the locust and oak. D. S. K.

Papilio Thoas.— Larvæ were taken a few miles out of the city in September last, by Mr. Victor M. Witmer. They were feeding on *D. fraxinella;* imagos from these, June 2d. Mr. David F. Day, residing within the city, has at the present date, July 4th, a number of the larvæ feeding upon the *fraxinella* in his garden.

D. S. K.

Thyreus Abbotii.— An example taken in my garden, May 20, 1881. It was at rest on a dark object, with the wings extended at right angles to the body, and the abdomen curved upwards after the manner of certain Pyralids. Riley has recorded the latter habit in *Mo. Rept.*, II., 79. D. S. K.

Cypripedium acaule.—May 28th I found a blossom of the above, in which a large humble-bee was imprisoned. While it had evidently crawled through the fissure of the lip, the valve-like edges prevented its returning, and it was too large to go out by way of the openings near the stamens. D. S. K.

On the Domestication of Some of our Wild Ducks.

By Charles Linden.

At an altitude of 1,291 feet above the sea level, and about fifty miles from Buffalo, as the birds fly, lies Lake Chautauqua, the largest of the inland waters of Western New York. It is a beautiful sheet of clear, dark-green water, of about eighteen miles in length, which, even in mid-summer, hardly ever has a temperature above 62° F., on account of its high elevation, and has, therefore, become a favorite summer resort for hundreds of people, who flock there to recruit health and strength. The basin of Lake Chautauqua is a deep trough excavated out of the rocks of the Chemung group, and well filled by the drainage of two low ranges of hills running at a short distance parallel to its shores. When these were covered with deep forests the rainfall was naturally more abundant and the level of the lake could then hardly have suffered any lowering, as its evaporation on account of its high altitude, is even now not excessive. But with the disappearance of the wilderness and the gradual deepening of its only outlet, the Conewango creek, changes have been wrought within our recent periods, which are inferred from the lacrustine deposits near the shores of the lake, and attest that its level was once twenty or thirty feet higher.

We are informed by old settlers, that twenty-five years ago deep forests of beech, poplar and chestnut covered every foot of that part of Chautauqua county, where there are now only scattered patches of second growth timber, more or less separated by intervening clearances. Their disappearance has in turn naturally produced many changes in the avifauna of the lake, and many species of birds, which used to breed there have now deserted their ancient haunts for less disturbed retreats.

It is by kindness of one of these old residents, Mr. Geo. Irwin, an accurate observer of nature, living near Mayville, that I have ob-

tained some information respecting the state of affairs before these changes happened, along with a brief summary of a series of systematic efforts, which were made by him for over thirty years, to domesticate several species of wild ducks which seemed to suit best for this purpose on account of their tendency to become easily tamed.

It is from this source, supplemented by frequent personal investigation of his ingeniously devised artificial breeding grounds, that I enabled to add a few notes of interest concerning the domestication of some of our wild water-fowl, and their habits under confinement.

Nearly all of the species of wild ducks which now occur about the shores of Lake Erie once frequented Lake Chautauqua before they were harrassed or driven away. Among them, as the most conspicuous, Mr. Irwin enumerates the Mallard, Dusky-Duck, Shoveller, Red-Head, Blue-Bill, Widgeon, Pin-Tail, Buffle-Head, Ring-necked Duck, Blue-winged and Green-winged Teal, Ruddy-Duck, Gadwall, Golden Eye, Scoter, Old Wife and Canvass-Back. Their ranks were sometimes swelled by the occasional occurrence of the Cormorant, Canada Goose, White-fronted Goose, Snow Goose and American Swan. All of the above species comprised at that time, as now, the ordinary visitors, with the exception of the Gadwell and Canvass-Back, both of which have always been rare on the inland waters of Western New York. The thick fringes of weeds and tall reeds along the shores of Lake Chautauqua are also still the favorite haunts of the Eared and Pied-bill Grebes, along with some scattered specimens of the Mud-Hen (*Fulica Americana*), which like these two divers, breeds here. The great abundance of various species of fish, principally perch and sun-fish, attract moreover each spring and autumn, the Goosander and hooded and common Mergansers, which last species bred here once in great abundance.

For the purpose of trying the final domestication of as many of the above species as could be conveniently obtained, a small lot of about an acre in extent and situated on the very edge of the lake itself, was, at an early time, selected for this purpose. The heavy weeds within that enclosure afforded secure shelter for the naturally shy and wild birds to hide in and enabled them to avoid detection on part of their many enemies, such as hawks, owls, mixks, etc., while a large amount of natural food supply was thus also

incidentally provided for from the tender shoots and roots of that spontaneous vegetation which formed the favorite diet of the wood-duck. A few crude and low wooden sheds, erected in various suitable places within the grounds, were designed for convenient shelter and served here and there for nesting purposes. These necessary preparations completed, the establishment was at last in readiness for the reception of its inmates, the first batch of which was obtained from young ducklings caught alive, or by means of eggs from the nests of the wild birds. From time to time old birds were added to this stock whenever they could be captured alive after having been winged in shooting them.

The species thus confined were chiefly the Mallard, Dusky-Duck, Wood-Duck and blue-winged Teal, since they bred here and could be easily obtained. Occasional experiments were likewise made with the Pin-tail and American Swan, both of which freely bred and raised their young in the enclosure, although they were never fully domesticated, nor even transferred from the breeding pen to the barn-yard. They remained virtually as wild all along as if they never had been subjected to captivity in order to finally transform them into fully tamed birds. They lived, bred and raised their young here without having any more restraints put upon them than were necessary for safe keeping. It was observed in case of the Dusky-Duck and Mallard, which proved the most tractable for domestication, by which I mean a complete metamorphosis into tamed barn-yard fowl, that they resisted all efforts to this purpose if transferred to the pen when over a year old, while the reverse happened when they were captured young and raised from eggs. The majority of them seemed to feel as much at home here as in any nesting ground of their own choice, and generally returned whenever they were permitted to migrate in autumn. They would breed the same as in the year previous, while others again only called for a few days, after which they left for localities unknown. In either case the females were accompanied by males, with which they mated while abroad, and these transient guests after migrating generally returned in late fall for a few days before their final southward migration.

This indicates that our migratory ducks not only remain with us in spring, but also call in autumn on their way back to their cho-

sen haunts in order to rest themselves. Of the several species within the grounds, which proved least refractory, and were therefore finally transferred to the barn-yard, none adapted themselves thoroughly to this state excepting the Mallard, Dusky-Duck and Canada Goose, the progeny of which prospered well and attained a greater weight and size than the ordinary domesticated stock.

Some of them are still living, and betray in many instances a tendency to revert, in point of plumage, to their original condition, while the majority have become completely metamorphosed into ordinary barn-yard fowl. No hybrids from any two different wild species, which bred only within the enclosure, were ever obtained, excepting from crosses between the Mallard and Dusky-Duck.

I was unable to learn what became of them; whether they were ever permitted to migrate, or whether they were incorporated finally into the ranks of the farm-yard stock. Whether such hybrids, if propagating their kind, transmit their peculiarities to the next brood, or otherwise, are interesting problems, as we could account for specific variations to arise as well in a perfectly natural condition, from which the birds here were hardly emancipated. A number of carefully conducted experiments with such hybrids would, however, be necessary, to arrive at definite conclusions in order to demonstrate the origination of a permanent new species by voluntary interbreeding.

The food of all ducks under confinement was invariably such as they are addicted to in their wild state, and consisted of various grains, with a mixture of acorns and the shoots and roots of aquatic plants for the Wood-Ducks. This species, though freely breeding in confinement, resisted all efforts for final domestication, and never failed to manifest great alarm whenever any person besides their keeper, whom they quickly learned to know, happened to intrude upon their seclusion. They would then quickly skulk and try to hide themselves in the tall weeds, which were growing in rank luxuriance, for better protection and retirement. Suitable nesting places were ingeniously arranged for them by means of hollow stumps of trees with inclined boards towards the ground in order to afford the pinioned birds an easy mode of access to their breeding holes. It was in these that they made their nests, in the same fashion as wild birds, and raised here for many

years successfully their young broods. In order to obtain additional information concerning the habits of the Wood-Duck and the manner in which their young reach the ground from their äerial nests, I made some special inquiries of Mr. Irwin, which were kindly responded to by that gentleman. As they embody his original observations upon the habits of the Wood-Duck in his vicinity, I quote the chief portion of his last note, which I received under date of November 15th, of this year.

Mr. Irwin states, that the Wood-Ducks generally commence here to nest about the middle of April, and always choose trees with suitable holes or hollows, in which to build their nests, preferring for this purpose rather high elevations. They deposit from nine to fourteen eggs, of a yellowish-white color, and their incubation lasts four weeks. The young birds, after being hatched, remain in the nests only about twenty-four hours, and their toe-nails are then almost hooked like those of the birds of prey, and sharp as a needle at the point. When they are ready to descend from their nests, whether low or high, the old bird comes to the mouth of the hole, and takes for about a half hour a careful survey of the surroundings, to ascertain, as it were, that no intruder is near, and next utters a low call. The ducklings seem to understand its significance and now quickly make their appearance in front of the hole, which often extends to a depth of from six to ten feet. By means of their sharp toe-nails they easily manage to climb up on the inside of the deep holes, at the entrance of which they remain a few minutes huddled together about the old bird. These preliminaries completed, the mother again descends to the ground near the tree, and calls upon her young brood, which now drop, one by one, from their airy perch, without any apparent hesitation whatever. Their bodies are already so thickly covered with down, that they seem to fall, as Mr. Irwin says, like a leaf to the ground. When the last duckling has accomplished this feat, they all gather again about the old bird, who now takes the lead and guides them to the nearest water, which they reach in a few minutes. The nest of the Wood-Duck is rarely more than fifteen or seventy rods away from it, and the young brood quickly hides under the shelter of any near-by cover for protection against their winged and four-footed enemies. In the course of a week or more they exchange this first retreat for one affording better security.

and prefer generally the shallow weed-covered ponds and edges of creeks and lakes. Their food for the first two or three weeks consists largely of the aquatic *larvæ* of insects or their developed imagoes, and this diet is shortly after abandoned in favor of the young and tender shoots of water weeds. When fully grown they feed in autumn upon beech nuts, acorns, etc., which they digest readily. The old birds mate here already about the first part of March, and commence to breed in captivity when they are one year old. During the earlier part of that period, until the female commences to hatch, they manifest many peculiarities by odd motions and curious calls, in which they do not indulge at any other time. It is then a common occurrence to see the drake swimming about restlessly in open water followed by the female, uttering all along a cackling noise resembling that of a turkey-cock when strutting about the barn-yard. The neck of the male is then stretched at its fullest length and the crest of his head is well raised, while his wings make a grating noise, which can be heard distinctly for several rods. All of these connubial antics can however only be satisfactorily observed, when the birds are without any suspicion of being watched. When domesticated no change of these habits is noticed.

Thus far Mr. Irwin details his own observations, taken in the woods and in his breeding pen, and unbiased by any coloring from accounts of any other writers. His experience in regard to the Wood-Duck in particular is of value since he succeeded to raise successive broods of that species for many years, amounting frequently to thirty or more full-fledged young in one season.

All of the various ducks he experimented with migrated southward, if not maimed, each autumn, and returned infallibly with a male mate, which remained until the female commenced to hatch, after which he departed for parts unknown, never to return. The crosses obtained with tame birds retained more or less their original plumage, but excelled them in point of size and proclivity.

It is to be regretted that the completion of a branch railroad from the main trunk of the Cross-Cut Railroad invaded this secluded spot and ended these experiments, which had been conducted so successfully for such a great length of time. They indicate, in this instance, that the majority of our wild ducks are not prone to change easily their former wild condition for that of per-

fected domestication, but also that they manifest no aversion to breed freely, even when they are placed under artificial restraints. The birds here generally returned to their haunts each successive spring in preference to any other; and moreover in the case of the females, induced a mate to come along with them. It is also evident that the Dusky-Duck is fully as domesticable as the Mallard, which has been thus far generally supposed to be the originator of our common tamed ducks. This species readily crossed with the wild Mallard and produced hybrids without any need of resorting to special inducements to accomplish this result.

Additional Notes on the Fauna of the Water-Lime Group near Buffalo.

BY JULIUS POHLMAN.

1 *Eurypterus giganteus*, n. sp. (Plate II., Fig. 1.)

This is the largest *Eurypterus* on record. One specimen consists of the head and four attached segments of the body, having together a length of ten inches, with a width of nine inches for the widest segment, and of eight and a half inches for the carapace. Accepting the proportions of other Eurypteri this would indicate an animal of a length of thirty inches. There are fragments of three anterior and of both swimming-feet, but their condition is too mutilated to warrant any attempt at description. The outline and the general surface markings are clearly defined, but the accompanying figure is taken full size, from a young specimen, which shows well the special characteristics.

It consists of the carapace and part of the first joint of the body. The carapace is semicircular, length to width almost as one to two. The eyes are smooth and reniform, and placed more towards the middle of the head than in any other of the Eurypteri, with the exception of *E. microphthalmus*, Hall. They are situated mid-way between the anterior and the posterior margins of the carapace, and the distance between them is only a little larger than the distance between the eye and the lateral margin. Between the eyes, and occupying the center of the head, there is a small, smooth circular protuberance. Crust thick and much wrinkled. The surface is covered with pustules of varying size which assume a scale-like form near the posterior margin of the carapace and on the remaining joint. These markings are like those of *E. pustulosus*, Hall, but the shape of the carapace and the position of the eyes are so totally different that these two species can be distinguished very readily. Width of carapace, three and three-quarter inches; length, two inches.

Another more fragmentary carapace of the same species, indicates an animal of an intermediate size; width of carapace, 5¾ inches;

length, 2⅞ inches. A fragment of the first and second joint attached to it show that the scale-like facets become a smaller and of more equal size as they pass from the first to the second joint. The little elevated dentate band near the margin of each joint, which is so characteristic of *E. pachycheirus*, is also present in this species.

Found in the water-lime group near Buffalo.

2. *Pterygotus globicaudatus*, n. sp. (Plate II., Fig. 2.)

Only one specimen has been found, consisting of five abdominal segments and tail. The segments are coarse and all of the same length, 1¼ inches; they increase rapidly in width, from 2¼ inches for the posterior segment to 5¼ inches for the anterior one and form strong, angular, lateral extensions over each other; the lateral margins of the joints are finely serrated in their posterior parts. The markings on the largest segment consist of scales overlaying each other. These scales are very small and delicate at the anterior portion and increase rapidly in size as they approach the middle and the posterior portion of the segment. In the remaining four segments the surface markings consist of large, irregularly-shaped and irregularly distributed pustules. The tail is flat, 2⅛ inches wide and 1⅞ inches long, oval in shape, and has its lateral margins regularly serrated; the posterior margin is smooth, and represents an even curve. The anterior margin in its connection with the last segment of the body, is 1½ inches wide. The surface markings are of the same pustulose character as those on the four abdominal segments.

Although the tail of this *Pterygotus* can be considered *as flat*, compared with the tail of the *Eurypteri* its shape in life must have been spherical, and corresponding with the body in thickness, for the caudal appendage of this specimen measures in its middle portions, three-eighths of an inch between the dorsal and the ventral surfaces, while the bodies of the *Eurypteri* in their thickest parts rarely exceed one-quarter of an inch.

Length of specimen, 8 inches; greatest width, 5¼ inches. Found in the water-lime group near Buffalo.

3. *Pterygotus acuticaudatus*, n. sp. (Plate II., Fig. 3.)

The tail of this species is longer than the two last abdominal segments combined, whereas in *P. globicaudatus* it is comparatively shorter, but wider. The specimen shows the tail with a length of

1⅜ and a width of 1 3-16 inches, the dividing ridge in the posterior half ending in a short spine, and the serrated margins, like the one described in the last number of this Bulletin. Fragments of eight abdominal segments which are shown on the stone, have a length of 4½ inches. The whole has a remarkable position turning almost upon itself. Neither part has any surface markings.

The term of *flat* seems more appropriate for the tails of this species, as they represent only very thin impressions, although both sides are present, and thicken only a little where their anterior portion connects with the abdomen.

4. *Pterygotus quadraticaudatus*, n. sp. Plate III., Fig. 1.)

One tail found. It resembles in form an irregular square with the anterior and posterior margins of almost equal length, running parallel; the lateral margins, extending at right angles to the anterior one for about one-fourth of their length, then assume a convex shape, and unite at an obtuse angle with the posterior margin. The lateral margin is serrated at its posterior half. Two slightly convex curves of equal length which form the posterior margin, connect in a concave indentation at its middle, and from here a faint dividing line originates which is visible for about one-quarter of the length of the tail.

The surface of the anterior portion is covered with small scale-like processes distinct from each other. The markings on the rest of the surface are obliterated.

Length of specimen, 2⅞ inches; greatest width, 3½ inches; narrowest part, 2⅝ inches. Found in the water-lime group near Buffalo.

We have thus, up to the present time, three distinct, specific characters in the tails of the American *Pterygotis*. We are justified in rejecting the assumption that they may simply represent different stages of development, as in the five specimens of *P. acuticaudatus* which our museum possesses; the tails range from 1⅝ to 6¼ inches in length, and all have the same shape without any variation whatever. On the caudal appendages of *P. globicaudatus* and *P. quadraticaudatus*, aside from their shape, the surface markings, unless altogether obliterated, are so different, that no difficulty can be encountered in identifying them even from small fragments.

5. *Pterygotus*, ? sp. (Plate III., Fig. 2.)

One single carapace has been found, which exhibits the dorsal side. It is a semi-eliptical with a proportion between its length and width of seven to nine; its sides are slightly rounded, and form a regular curve with the front. The eyes are marginal and project beyond the outline of the carapace; they must have been nearly, if not perfectly circular in shape, as their present length is 1⅝ inches, and the greatest width almost 1 inch. Their surface resembles very closely the facets of the eyes of insects. The markings on the surface of the carapace have all been obliterated excepting those on the anterior and lateral margins, which are covered with small, scale-like processes.

Length of specimen, 3½ inches; greatest width 4½ inches. Found in the water-lime group near Buffalo.

Owing to the fact that the specimen presents no specific marks whatever, and in view of our limited knowledge of the genus, I have not referred it to any species.

6. *Pterygotus macrophthalmus*, Hall. ?

The specimen consists of a perfect carapace with very distinct marginal eyes and outline. It presents the same proportions and also the small, central tubercle of this species (*Palæontology of New York*, Vol. III., page 418), although this latter is not very distinct, but differs in having a more square-shaped carapace.

The two swimming-feet which project from under the carapace show the seventh joint with the triangular piece attached by a soldered suture along one-half of its width, while from the other half there is a triangular extension of the joint. (B. B. S. N. S., Vol. IV., No. 1.) The palette is ovate. There is no terminal palette.

7. *Pterygotus Buffaloensis*, Pohlm. (Plate III., Fig. 3.)

Another fragment of this species has been found, which illustrates the "chelate antennæ" of the genus. The specimen shows this appendage complete. The free ramus has its teeth standing at right angles to the edge, like *P. Cummingsi*, Grote & Pitt (B. B. S. N. S., Vol. III., p. 18), and *P. cobbi*, Hall (*Palæontology of New York*, Vol. III., 417), but the fixed ramus of this chela has the teeth inclined at an angle of about 45° to the edge, like the one

described and figured in the last number of this Bulletin. The two joints of the antennæ measure, resp., 2⅛ and 1¾ inches in length, with a width of a little more than one-eighth of an inch for the anterior, and a trifle less for the posterior joint. Judging from their thickness, they must have been cylindrical in shape. The whole length of the appendage is 5⅝ inches. The specimen shows also the fragmentary parts of ten body segments, one swimming-foot and three anterior feet. These latter are more slender and have longer joints than the corresponding feet in Eurypterus. The surface markings of the body consist on the first six segments, of small scales, and on the remaining four, of small, irregularly scattered pustules.

Length of the ten segments, 7½ inches. Geological position and locality: the water-lime group near Buffalo.

If we take it for granted that the above described chelate appendage did belong to the body, which, to some extent covered it, and of which a portion had to be chipped away to expose the ramus, then these antennæ have been the largest appendages of the genus, longer even than the swimming-foot.

There cannot be any doubt that the body was a part of a Pterygotus, on account of the peculiar surface markings, the shape of the anterior feet and the swimming-foot, the latter had to be cut away, together with a part of the body; and, however opinions may differ as to the relation in which the "chelate antennæ" stood to the body, we must admit that this organ existed in the shape described and figured for *P. bilobus*. (*Palæontology of New York*, Vol. III., 424.)

All the above described specimens are in the museum of the Society.

Notes on the Larvæ of Some Local Pterophoridæ.

BY DAVID S. KELLICOTT.

The following species are known to me in the larval stage: *Platyptilus cardui*, Riley; *Œdematophorus cretidactylus*, Fitch; *Lioptilus homodactylus*, Walker; *L. kellicottii*, Fish, and *Aciptilus montanus*, Walsingham. These, together with *Platyptilus bertrami*, Rössl (P. bischoffii, Zell.), *Oxyptilus periscelidactylus*, Fitch, *O. nigrociliatus*, Zeller, and *Pterophorus monodactylus*, Linneus are the only species of this family inhabiting the vicinity of Buffalo at present known to me.

PLATYPTILUS CARDUI was first described by Mr. C. V. Riley, in *Insects of Missouri*, I., page 180, 1869, as *Pterophorus carduidactylus*. This paper gives an account of all stages, with figures. I make the following references to additional notices and descriptions: Zeller, Stet. ent. Zeit., xxxii., p. 179, Verh. z.-b. Ges. Wien 1873, xxiii., p. 318; Walsingham, Pter. of California and Oregon, p. 7, 1880; *Pterophorus cardui*, Riley, Bulletin No. 6, U. S. Ent. Com., p. 83, 1881.

This moth is not uncommon in the neighborhood of Buffalo. The larvæ are to be found from June until August, on *Cersium lanceolatum* and some other species of the genus. A large percentage are destroyed by a parasite which Mr. E. T. Cresson determines for me as one of the varieties of *Ichneumon humilis*, Provancher. From a half dozen pupæ collected in July, 1880, but one moth escaped; five gave the parasite; these enemies were less numerous in 1881. The gregarious larvæ draw together the leaves about the terminal bud of the main stem or of a branch, in these webbed masses may be found larvæ of different sizes; before transforming they burrow into the end of the growing branch thus arresting its growth. The withered and dead leaves aid the collector by at once indicating the presence of the larvæ.

The pupa, when about to disclose the moth, worms its way out of the burrow after the manner of the pupa of a Tortricid or an Ægerian; this it is able to do by means of rather stout black cusps on its abdominal rings, and its pointed head-case. The pointed cremaster bears on either side about twenty long hooklets.

ŒDEMATOPHORUS CRETIDACTYLUS and LIOPTILUS HOMODACTYLUS have both been reared from the foliage of *Eupatorium purpureum*. Early in June, 1880, I found the gregarious larvæ spinning together the leaves of the plant which grows plentifully on waste low lands near the city. The same bundle of leaves which usually included the terminal bud, often contained several of the woolly caterpillars of different sizes, e. g. from .1 to .3 of an inch long. The largest ones, however, were, as a rule, found feeding singly on the unfastened older leaves; it appears that the young larvæ remain in company on the tender leaves until of considerable size when they scatter. It was observed that some of the larger ones were of darker color than others; this was supposed to be a mere color variation, no other differences being noted. They are quite unlike the active larvæ of the thistle plume, for they are sluggish, nor do they destroy the growth of the stem of their food-plant. They appear to depend for protection upon their resemblance to the being, roughish, woolly surface on which they rest. So far, no parasite has been observed destroying them. By the middle of June they began to transform, the larger ones giving darker pupæ than the lighter ones, no other special difference noted. June 27th the moths began to appear. The dark pupæ giving moths very different from the lighter ones, and yet with the foregoing facts in mind it was difficult to conclude that the moths were not varieties of one species instead of distinct species, and as it proves of different genera. Both sorts were sent to Professor Chas. Fish, Brunswick, Maine, who determined them as above. He also sent them to Lord Walsingham who confirmed the determination.

During the past summer I again noted the occurrence, etc., of the same, and give here the facts from my notes, made at the time. The larvæ first seen May 30th; the smaller ones were all among the young, woolly leaves, the larger on the more advanced leaves. There were at this date three sizes, respectively .12, .25 and .34 of an inch in length. The first sort were white, attenuated both anteriorly and posteriorly; the hairs arising from the tubercles are not spinulose, at least not seen to be so under a half inch objective with the middle eye-piece, hairs of unequal length, all white; those from the first ring do not arise from tubercles, they hang over the head but slightly or not at all. The first thoracic ring is nearly twice the width of

the head, which may be almost entirely drawn into the ring. The next larger ones were pale, yellowish-green; hairs relatively longer, smooth; dorsal line white, not distinct, but uninterrupted. The largest were of the same hue but deeper; in many the eighth and ninth rings were yellow; dorsal line white, more decided, interrupted, i. e., made up of dashes and rings as stated below for the adult larvæ. The subsequent changes were mainly those of size, deepening of color and a less woolly appearance. I was unable to discover any differences by which I could, with certainty, separate those of *monodactylus* from those of *cretidactylus* until the third (?) moult, when those of the latter have somewhat darker colors than those of the former.

Full grown examples of each are described as follows: *Homodactylus*; length .55 of an inch; pale yellowish-green; dorsal line sharply defined, white; subdorsal and stigmatal lines similar; the top of each ring from the second to the tenth bears a minute circle of white interrupting the dorsal line. The dorsal spaces of each ring from the fourth to eleventh bear a pair of tubercles on either side of the middle line, from these proceed rather long, stiff, hoary, smooth hairs; the thoracic and terminal rings have a single papilla in place of the pairs. These tubercles stand in a light stripe. Below them a single tubercle with similar appendages; below the spiracles a larger one with a minute one back of it bearing three or four hairs, also one above the line of the feet. Legs and ventral surface hairy. The anterior half of the first ring bears many hairs which hang over the head somewhat. Spiracles round, rim white, back of each there is a short, stiff hair. Head almost colorless, except mouth organs and oceli; epicranial suture deep; cranial lobes hemispherical, with scattered hairs.

Cretidactylus. Length .55 of an inch; color of skin greenish, striped with wine-color and white; hairs dusky, lighter laterally. Dorsal line white, interrupted with circles as in the former, and bordered laterally with wine-color. That part of the dorsal space in which the tubercles stand much lighter in hue; subdorsal and stigmatal lines white bounded by the same shade as the dorsal. Tubercles as in *homodactylus.* Head light green, same form as the other. Spiracles ringed with brown.

I note the following differences and resemblances: habits identical, also form and size, no difference in color thus far noted until half grown. The differences noted, besides color as above, are all microscopical and yet sufficient to at once separate them. The hairs on *cretidactylus* are shorter than on the other, and remotely plumose; under a magnifyiug power of from one hundred and fifty to two hundred diameters this difference is marked, those of *homodactylus* showing no spines, upon the other they are apparent; the ends of the hairs are more acute in the latter than in the former; the subdorsal papillæ in the dark ones stand nearer together than in the others; the minute papilla back of the substigmatal tubercle bears but two or three hairs in the dark ones and three or four in the light ones. Other differences of this nature have been noted. I have no doubt that there are similar differences in the younger larvæ. It is surprising how nearly alike these preparatory stages of two moths belonging to distinct genera prove to be. Color in this case is a convenient difference as it affords the only ready means of separating the larvæ.

The pupa of *homodactylus* measures .45 of an inch. It is light pea-green, turning white before the moth escapes. There is a clear dorsal space with an interrupted white line in the middle; also white lines on the lateral faces. The tubercles are set with hairs exactly as in the larvæ so the pupa is quite conspicuously clothed; the head and thorax support shorter hairs arising singly from the surface; short, dusky hairs stand in rows on the wing covers apparently outlining the veins; there is a similar row on the antennæ covers. The pointed cremaster ends with many hooklets which fasten the pupa securely to the leaf on which a tuft of silk has been spun by the larva. The thorax is quite obliquely truncated; seen from below it is slightly bilobed, rendered so by the prominent origin of the antennæ covers; between the lobes there is a slight, tufted tubercle.

The pupa of *cretidactylus* has the same size and habits. Color green ornamented with wine-colored and white lines. Tubercles similar to the above. It is a little thicker, the anterior end more obtusely truncated and less bilobed. The hairy clothing similar to *homodactylus*, but hairs not so smooth as in that pupa.

I have examples of both sexes of each species. *Homodactylus* varies much and both varieties, *a* and *b*, of Walsingham appear

among them, or at least very near these varieties. The females are lighter than the males. *Cretidactylus* varies but slightly; the males are lighter than the females.

Lioptilus kellicottii was described by Prof. Chas. Fish in the Canadian Entomologist, xiii., 141. I gave an account of its habits in the same, xii., 105. I repeat a few particulars since its history is so totally different from that of any other species referred to in this paper.

In August, the larvæ may be found boring the ends of the stems and branches of different species of golden-rod,—it appears to prefer *Solidago altissima*. In September they leave the same and bore into the pith of the stem just above the ground; they work down into the roots where they pass the winter. In May it returns to the place of entrance clearing the way for final escape in the moth state. The pupa skin is left in the burrow, i. e., the pupa does not worm its way out before hatching. The moths appear from the 1st to the 15th of June.

Aciptilus montanus was referred to in the papers from the Can. Ent. mentioned above; it has been described by Walsingham in Pterophoridæ of California and Oregon, page 59.

The larva feeds upon different species of *Solidago*. The first examples were noticed this year on May 30th. At this time they were found only on the under side of the leaves, later they occur on the upper as well. As a rule, they lie close to and parallel with the mid-vein. At least while young they eat out the parenchyma leaving the epidermis.

May 30th, the larvæ were .1 of an inch and less in length; entirely white except claws and mandibles. The body is not flattened at this stage. The first ring is broad and the head may be well withdrawn into it. The tubercular hairs are spined, plainly seen under a moderate magnifying power.

June 3d, the largest had evidently moulted, length then .2 of an inch; pale green, eighth and ninth rings yellow. Lateral tufts more conspicuous. Dorsal line faint. Subsequent changes not noted until full-grown larva was described the latter part of June. Length .35 to .4 of an inch. Pale pea-green, head paler, dorsal stripe

of three white lines, the middle one the finest and most clearly defined. The seventh, eighth and ninth rings yellow. The posterior subdorsal papilla of the body rings bears two unequal hairs, the anterior but one; above the spiracles and in front of them also is a papilla; below the same there are two from which arise long hairs, five from posterior and ten or twelve from anterior, these are spread out fan-like, below these a prominent longitudinal fold. From the first ring proceed long hairs reaching over and beyond the head. Hairs all unbranched and plumose. The body is considerably flattened, so when looking down upon it the spiracles from either side may be seen at once, spiracles conical, rings black.

The *pupa* is .3 of an inch in length; light green, some of them have a reddish stripe along dorsal part of the abdomen, the conical spiracles of such have the same hue. The upper part of the rings well clothed, especially at extremities, and along the lateral ridges. Pupa fastens to a tuft of silk by means of the hooks of the last ring. Moth appears through greater part of July.

All the above mentioned larvæ are common, but their moths, except *montanus*, have not been noticed in any numbers, even when looked for at the time when known to be hatching. It is easy to see how a rare species may escape so long the vigilance of collectors. *Montanus* has been seen literally in hundreds among the golden-rods where it abounds. All these species appear to be single brooded.

A New Tortricid.

BY C. H. FERNALD, ORONO, MAINE.

Eccopsis footiana, Robs. Mss.

Palpi pale yellow; second joint with the terminal hairs touched with reddish-brown, and with two dark brown spots on the upper part of the outside, one near the base, the other towards the end; last joint small, dark brown; head and thorax above, rust-red, with some transverse dark brown marks on the thorax and patagiæ; fore wings light reddish-brown, with a faint metallic luster under the lens, and minute, irregular cross streaks; basal part of costa to central band, pale, reddish-yellow, with about eight very small dark brown spots on the costal edge; basal patch, concolorous with the thorax, beginning on the subcostal vein extends across the wing, the outer edge running obliquely to the fold, then inward to a point near the humeral angle on which is a small tuft of rust-red scales like the prominent thoracic tuft. The outer edge of the basal patch forms very nearly a right angle at the fold.

The central band extends from the middle of the costa obliquely across the wing to a point a little beyond the middle of the hinder margin, where it is much narrower than on the costa. The inner side of this band is comparatively straight, while the outer side has three outward prolongations, one on vein eight, the second and longest on vein six, and the third, much shorter and very obtuse on the fold. This band above the fold is concolorous with the basal patch, and marked with dark brown, while below it is much lighter and scarcely differing from the ground color of the wing. The costa beyond the central band is reddish-brown, cut by five geminate, light yellow streaks. The subapical band extends from the second interspace between the yellow streaks beyond the central band on the costa, as a narrow stripe down to vein eight where it suddenly widens and extends to the middle of the outer margin. The broad part of this band is concolorous with the basal patch. From the upper part of this band a faint streak extends across the wing to the

apex of a scarcely visible triangular spot which rests on the anal angle. The portion of the wing over the cell, between the basal patch and central band, is washed with shining fuscous.

Fringes, basal line light brown, beyond, reddish-yellow around the anal angle, and the same alternating with fuscous above.

Hind wings above and beneath light fuscous outwardly, paler basally. Fringes very light, almost white, with a pale fuscous basal line. Abdomen above and beneath light fuscous except at the base beneath, where it is light yellow. Under side of fore wings fuscous, yellowish on costa where the markings of the upper side are shown.

Legs light yellow touched with fuscous on the outside of the femora and tibiæ and the base of the tarsal joints.

Expanse, 20–22 mm.

Habitat, New York, Pennsylvania. Described from four males and three females.

This species was named *footiana* in the Collection of the American Entomological Society by the late C. T. Robinson, but no description was published. I have therefore adopted his name.

Additional List of Coleoptera.

COLLECTED BY OTTOMAR REINECKE.

The following Coleoptera have been observed and collected since the publication of the local list of Coleoptera, in the vicinity of Buffalo, in the last Bulletin of the Buffalo Society of Natural Sciences.

Nomaretus bilobus, *Say.*
Clivina rufescens, *Lec.*
Lebia moesta, *Lec.*
Lathrobium punctulatum, *Lec.*
Bledius fumatus, *Lec.*
Scaphium piceum, *Mels.*
Orphilus ater, *Er.*
Coxelus guttulatus, *Lec.*
Harmonia picta, *Band.*
Teretrius americanus, *Lec.*
Aeletes politus, *Lec.*
Oedostethus femoralis, *Lec.*
Elater collaris, *Say.*
Ludius abruptus, *Say.*
Glyphonyx testaceus, *Mels.*
Limonius aurifer, *Lec.*
Corymbites vernalis, *Hentz.*
furcifer, *Lec.*
Asaphes decoloratus, *Say.*
Ichnea laticornis, *Say.*
Anobium notatum, *Say.*
Xyletinus fucatus, *Lec.*
Phymatodes varius, *Fabr.*
Xylotrechus convergens, *Lec.*
Toxotus Schaumii, *Lec.*
vestitus, *Hald.*
Pachyta monticola, *Rand.*
Leptura mutabilis, *Newm.*
Chlamys plicata, *Fabr.*
Pachybrachys luridus, *Fabr.*
Xanthonia villosula, *Mels.*
Typophorus metasternalis, *Cr.*
Anthicus elegans, *Laf.*
Mordellistena lutea, *Mels.*
fulvicollis, *Mels.*
ambusta, *Lec.*
Eugnamptus collaris, *Gyll.*
Scythropus elegans, *Couper.*
Magdalis inconspicua, *Lec.*
Thysanocnemis fraxini, *Lec.*
Sphenophorus cariosus, *Oliv.*
zeæ, *Walsh.*
Xyloterus politus, *Say.*
Eurymycter fasciatus, *Oliv.*

Notes on the Spongillæ of Buffalo.

BY HENRY MILLS.

The presence of sponge spicules in most diatomaceous deposits has led to the conclusion that sponges themselves may be looked for in all perennial, running streams, brooks or lakes. Facts of almost daily occurrence prove this conclusion to be correct, for whenever intelligent search has been made at the right season, the search has not been in vain. Among the first objects found in the microscopic examination of water from Niagara River were these transparent, pointed, slightly curved bodies, which the experienced microscopist recognizes as proof of the near presence of sponge. In October of 1879, Mr. D. S. Kellicott found the first specimen, on the pier at Black Rock, near Squaw Island. Subsequently three other species have been found by him and myself. One of them, we think, is new to science. All were named numerically, in the order found, till they could be identified.

No. 1. This most abundant species has been identified as *Spongilla asperima*, Dawson. Sponge generally sessile, encrusting; thin; surface undulated. Oscula rather large, scattered; Skeleton spiculæ fusifomi-acerate, slightly arcuate, stout, spined with the exception of the extreme apices; length 0.01 to 0.009 in. These are mixed with a few more slender. Ovarian capsule or statoblast subglobose; dia. nearly 0.02 in. Spiculæ birotulate short; rotulæ equal in size, flat, very deeply divided, 0.0005 to 0.0007 in., equal to or greater than the length of the shaft; radii not acute; shaft with a distinct boss at each end.

No. 2, *Carterella tubisperma.* The specimens of this variety found previous to the present season (1881) were so small and fragmentary that but a poor idea of its character and growth is given in my presentation of it, in a paper read before the Buffalo Microscopic Club in April, 1880. During October of this year I found it in large pieces, attached to river weeds, under and upon rocks and stones and pieces of wood. In one or two instances I

have found it as large as one's hand and an inch and a half thick. It is generally green, but not always. Skeleton spiculæ fusiformi-acerate; slightly curved, moderately stout, spined. Spines small, sparsely distributed; length 0.01 to 0.012 in.; apices naked. These are mixed with many fine, delicate spiculæ, densely spined to the end; length 0.009 in.; scattered in groups on slide of mounted specimens. I cannot say what is their true place in the sponge. Ovarian capsule or statoblast globose; dia. 0.02 in.; foramen tubed, tube terminating with from three to ten tendril- or tentacle-like processes; spiculæ birotulate, long, very delicate; length of axle 0.015 in., one or more spines on axle; rotulæ slightly arcuate, equal in size. Length of tube to foramen 0.01 in., varying a little; the length of the tentacle-shaped processes is from .02 to .0125 in. The walls of the statoblasts of this species are very thick, and consist of three coats. The outer or encrusting wall is made up of the birotulates, which are imbedded in a greyish substance the character of which is unknown. The birotulates are placed radially, and give great strength to the body. The second coat is much thinner and is called the chitinous coat, from the character of the substance of which it is composed. The inner or investing membrane is very thin and delicate. Its office is to hold the germinal matter of the statoblast, which it does, fitting up close into the tubular opening in a nipple-like form, ready to allow the contents of the statosphere to flow into the tube upon its rupture at the proper season.

No. 3 is difficult to describe from specimens found in our locality. The action of the water upon the rocks where it is found is so great as to take away all the upper part of the sponge. We have identified it, however, with a species found in Philadelphia and named by Dr. Leidy *S. fragilis*. The ovarian capsules or statoblasts lie close together in a mass, attached to rocks or any object in its way. Above these, and enclosing them, is the sponge proper, made up of spiculæ sarcode and other elements that constitute the spongillæ. The statoblasts are nearly globose, sometimes rather flattened; foramenal tube short, sometimes erect and sometimes bent over; outer wall of statoblast thin and leathery, with cellular structure, overlaid with small, not pointed, densely-spined spiculæ; skeleton spiculæ fusiformi-acerate, not spined. Only small specimens of this species have been found.

No. 4 is identical with a specimen found in the Ottawa River by Mr. Geo. Dawson, of Montreal, and named by him *S. ottawaensis*. From some cause it does not grow large in this locality. I found the largest pieces during last October that have been found. These were quite fragmentary, the sponge having been pierced through and through with numerous worms and other carnivorous animals that feed upon it. The statoblasts are found in groups, consisting of from two to four. These are cemented and enclosed in an enveloping sarcode or other substance, with the short foramenal tubes projecting on the sides and generally turned upward. The spiculæ surrounding these, and which lie on the surface of the statoblast horizontally, much resemble those of the *S. fragilis*, except that they are more pointed, and, I think, not so densely spined. The wall of the statoblast is very thin and beautifully cellular in structure.

The tubular prolongations and the appendages on No. 2 (*C. tubisperma*) were so exceptional to anything described in sponge literature, that the attention of two or three geetlemen who had made the subject of sponges a specialty was called to them. Specimens were sent and opinions solicited. Among those who were consulted was Edward Potts, Esq., of Philadelphia, who, strangely enough, had just discovered a specimen near Philadelphia, differing greatly from ours, but having some of the tubular and tendril prolongations. He subsequently found another, differing from the preceding, yet having the same uncommon attachments. Thus we had three species undescribed and unknown to science. Of course, we felt justified in establishing a new genus. Mr. Potts proposed to name it after Mr. Carter, the celebrated spongiologist of England. Accordingly, specimens were sent to him for his inspection and approval of the new genus.

The three species were named *Carterella tenosperma*, *C. latitenta* and *C. tubisperma*, the latter being the Buffalo species. To our very great surprise, as soon as Mr. Carter had seen them he pronounced the tubes and appendages to be a new species of *spongiophaga;* that is, a parasite which he discovered in a marine sponge in 1878. In the *Annals and Magazine of Natural History* for November, he states his reasons and gives drawings, well executed, but in some cases not correct representations of the objects as we see them under

the microscope. He states his belief that the parasite is a form of nematoid worm. That Mr. Carter has made a great mistake in his conclusions, no one in America who has seen the objects will doubt in the least. The tubes and prolongation of tendrils are as obviously a part of the sponge as the finger is a part of the hand. In no case can any joint, or suture, or other point of attachment be discovered, and the material or substance of which they are composed is, to all intents and purposes, the same as the chitinous or middle wall of the statoblast, of which it is a mere continuation. This applies equally with all three of the species. The subject may give rise to a lively controversy, unless Mr. C. should weaken and step down from his position.

Since penning the above, two other species, new to us, have been found in this neighborhood; one by Mr. E. S. Nott, of Hamburg, N. Y., and the other by myself in Niagara River. The one found by Mr. Nott, and sent to me for identification, I took to be *Spongilla carteri*, a species hitherto only found in Bombay, India. But, on a more thorough examination and subsequent comparison with a type-specimen from Mr. Carter's collection, I conclude that it is another species, probably new and undescribed. A description of it, without measurement, is as follows: Sponge sessile, color, faint whitish yellow, structure fragile. Skeleton spiculæ smooth fusiform, curved gradually, sharp-pointed. Statoblasts globular; aperture infundibular; crust thinner than in *S. carteri*, but similarly composed of columns of polyphedral cells, hexagonal in the section, regularly arranged one above another in juxtaposition, perpendicularly to the outside of the chitinous coat, on which they rest; surrounded by a layer of minute fusiform curved spinous acerates. It is evidently of the *S. lacustris* type. The species discovered in Niagara River, in the early part of December, I have not been able to identify. It resembles *S. asperima* in many respects, but is so different in others that it cannot be considered identical. It is very compact, encrusting weed and grass or whatever may be in its way. Many statoblasts are oval. Birotulates sparsely distributed. Skeleton spiculæ numerous and adhering longitudinally in masses. According to the latest classification, this would belong to the genus *Meyenia*.

Observations and Notes.

Clathrulina elegans.—I found this most beautiful Rhizopod April 30th, last, in a "brick pond" at Hamburg, this county. The animals were hanging down by their almost colorless pedicles, attached to the fibers of *vaucheria;* they were often in chains, the founder of the colony fastened to the alga, while successive individuals clung to the "baskets" of those giving rise to them. Three generations were seen thus attached. In this gathering I found those self-dividing, so there were two, and in one case four examples in one nest. The young just beginning to build its house, and its lattice-work as well, are perfectly colorless.

Polyzoa.—I have identified from the Niagara, near the city, the following species:

Paludinella Ehrenbergii, Van Beneden.
Fredericella regina, Leidy.
Plumatella diffusa, Leidy.
Plumatella arathusa, Hyatt.
Plumatella vitrea, Hyatt.
Pectinatella magnifica, Leidy.
Cristatella ophidioidea, Hyatt.

Phlœosinus liminaris, Harris.—Mr. W. W. Stanard called my attention to a beetle doing much injury to the peach trees at La Salle, N. Y. On visiting the orchards mentioned by him I found many trees with their trunks covered with gum, exuded from the galleries made by the beetle. Many trees were dying, apparently from that enemy. Larva, pupa and beetle were found plentifully, late in September, 1880. The State Entomologist identified it.

Heliothis armiger, Hübn.—In July last the larva of the "corn worm" at Corunna, Michigan, was so abundant that early corn was considerably damaged. In one field I found more than half the ears had been eaten into by it. (See Riley, Ins. Mo., III., 104.)

Aletia argillacia, Hübn.—The moth was abundant about Buffalo from September 10th to the end of November.

Ægeria tricincta, Harris.—In the *Canadian Entomologist*, XIII., 1, I pointed out that the larva of this species occurs in the stems and branches of *Populus candicans*, and often in enlargements of the stem resembling those made by *Saperda mœsta*. I have since found the larva in similar galls in the willow. It appears to have the same relation to *S. concolor* in the latter plant as to *mœsta* in the former. This larva is at once distinguished from any other Ægerian known to me by two black conical teeth on the terminal ring.

D. S. Kellicott.

Catocala amatrix, Hübn.—In July, of this year, I found caterpillars of this moth abundant on the Lombardy poplar; also on *P. tremuloides*. The full-grown larva is 3.5 inches long, smoky yellowish-gray; lateral fringes brownish. They spun up late in July, the moth appearing in about three weeks. A few caterpillars were observed in August.

Darapsa versicolor, Clem.—This beautiful and rare sphinx feeds on the button bush (*Cephalanthus occidentalis*); I have not met it on any other plant. I have for years tried to rear it from the caterpillar; so far I have met with indifferent success. Two years ago I took twenty-one larvæ, apparently in good condition, on a space covered with the button bush, not exceeding one hundred square feet. They were treated with much care, but to my sorrow one after another died; at the end of a week only five remained, all of which spun the usual light cocoon at the surface of the ground and changed to pupæ; these remained alive until spring, when they, too, one after another died, save one, which in May gave a fine imago. Last year a smaller number of larvæ were found; again only one moth was obtained. This year, although the larvæ were put upon plants growing in flower-pots, nearly all died before transforming. The caterpillars are usually found on plants growing in shady swamps, but rarely in borders of the same where exposed to the sun.

I have often taken the moth at "sugar," *i. e.*, upon strings of dried apples soaked in stale beer and molasses. *D. chœrilus* is attracted by the same bait, while *D. myron* I have never taken at the same.

Ph. Fischer.

Cardinalis virginianus.—In the early part of November a finely plumaged male cardinal made unexpectedly its appearance on the premises of Mr. David F. Day, of Buffalo. The house of that gentleman is situated in the very heart of the city; and as it is surrounded by an unusually fine garden, the strange guest would naturally be tempted to prefer this locality. The call of a captive pet cardinal, the notes of which, whenever the cage was placed near the open window, could be heard for a long distance, may also have been one of the principal reasons for the presence of the novel guest. After making regularly its appearance with early daylight, the bird disappeared mysteriously after a few days, but turned up again towards the latter end of November, when it remained constantly during the severe cold which characterized here the last part of that month and early December. The advent of milder weather witnessed again the disappearance of the Cardinal, which was at last looked for as a matter of course by every member of the household; but to the great delight of all concerned, the bird, after spending a short vacation in parts unknown, revisited the place on December 26th for the last time, as it was fortunately captured, after many ineffectual attempts to accomplish this result. It became very quickly tamed, and may have been, after all, only an escaped pet bird, although its fine plumage, approaching in color rather the vermillion than the cinnabar, does not agree with this view. Its legs are also darker than those of old cage birds, and its short toe-nails indicate immature age.

The Cardinal is not known to breed in the neighborhood of Buffalo, where it has only been observed as a rare visitor towards the latter end of May. There appears to be, however, no reason why it should not become acclimated here, since it occurs as a resident breeder already near Toledo, which is hardly a hundred miles due south of Buffalo.

CHARLES LINDEN.

ADDITIONS AND CORRECTIONS.

Page 77, line 18. For "Gen." read "Wyom."
Page 78, line 29. For "Gen." read "Wyom."
Page 79. To the list of localities of *Hydrastis Canadensis* add "Brant, Erie Co."
Page 79. To the list of localities of *Cimicifuga racemosa* add "Gowanda, Erie Co."
Page 81. To the list of localities of *Adlumia cirrhosa* add "Port Colborne, Ont."
Page 82, line 14. After "Buffalo," add the words "(the station destroyed)" and strike off the same words from the next line.
Page 83. To the list of localities of *Camelina sativa* add "Bergen, Gen. Co."
Page 83. In the last line, for "Mœnsch" read "Mœnch."
Page 84, line 12. For "Capsaridaceæ" read "Capparidaceæ."
Page 91, line 28. After "Creek" insert "Evans."
Page 95, line 7. Strike out "Catt." and insert "Chat."
Page 96. To the list of localities of "*Rosa micrantha*," add "Fort Erie, Ont."
Page 100, line 20. Strike out "*Conioselinum Canadense*, Fischer," and insert the same words after "Michx" in the following line.
Page 101. To the list of localities of *Berula angustifolia*, add "near Port Colborne, Ont."
Page 108. To the list of localities of *Silphium laciniatum*, add "Cattle yards at E. Buffalo. *J. F. Cowell.*"
Page 110. To the list of localities of *Artemisia vulgaris*, add "Ft. Erie, Ont."
Page 110. To the list of localities of *Lephanthus nepetioides*, add "Ft. Erie, Ont."
Pages 123 and 124. The names "*H. Indicum*," "*I. purpurea*" and "*C. arvensis*" should have appeared in small capitals.
Page 128. To the list of locatities of *Chenopodium ambrosioides* var. *anthelminticum* add "Streets of Buffalo."
Page 137. In the last line for "*W. Braziliensis, Karsten*" read "*W. Brasiliensis, Weddell.*"

The Plants of Buffalo and its Vicinity.

BY DAVID F. DAY.

It is quite certain that before the establishment of the BUFFALO SOCIETY OF NATURAL SCIENCES no one had undertaken to investigate the Flora of Buffalo and determine what plants it comprised.

It is true that at rare intervals some of the early botanists and collectors had visited our neighborhood. As long ago as 1749, KALM, a contemporary and correspondent of LINNÆUS, made an excursion to the Falls of Niagara, and, undoubtedly, collected some of the remarkable plants of that locality. In 1806, PURSH, the author of "Flora Americæ Septentrionalis" (as we are informed in his preface) "traversed the extensive and highly interesting country of the Lesser and Great Lakes." In the following year, MICHAUX, the younger, while engaged in a botanical exploration in western New York, traveled from Batavia to Buffalo, recording some interesting observations respecting our primæval forest; and, some fifteen or twenty years later, DRUMMOND and DOUGLASS, distinguished botanical explorers, made collections of plants at Niagara. Unfortunately, however, only the scantiest and most unsatisfactory record reaches us of the labors and discoveries of these pioneers of botanical science in this vicinity.

Probably the earliest botanist who had a permanent residence in Buffalo, was Dr. JOHN A. KINNICUTT:—in 1828, one of the physicians of the village. In "The Flora of the State of New York," TORREY makes acknowledgement of having received from Dr. KINNICUTT some of our more notable plants: but, aside from this brief mention, we have no account of his botanical labors.

Upon the organization of the BUFFALO SOCIETY OF NATURAL SCIENCES, in December, 1861, a Committee on Botany was appointed, consisting of the Hon. GEORGE W. CLINTON, the Society's first President, Dr. CHARLES C. F. GAY, and the compiler of the present Catalogue. In the spring of 1862, the Committee began an investi-

gation of the Flora of Buffalo and the formation of an Herbarium, for its illustration. At the close of the year 1863, two seasons having been spent in the field, the Committee had detected and identified 936 species, or well-marked varieties, of phænogamous plants. A list of these, and of 40 species of vascular cryptogams, which had also been collected, was prepared by Judge CLINTON and published in the spring of 1864.

The investigation thus begun, although not always prosecuted with the assiduity which at first characterized it, has never since ceased. At the present time the plants which have been collected in our region, and of which specimens are contained in the Herbarium of the Society, amount to not less than 2800 species. It is confidently believed that except in the lower orders of the *Cryptogamæ*, the number of species belonging here, and which still remain to be discovered, is comparatively small. Hence, the Society has deemed the present time a proper one to give to the botanical world a Catalogue of "THE PLANTS OF BUFFALO AND ITS VICINITY."

In preparing such a catalogue for publication, it has been thought well that it should embody the results (so far as they have proved accessible) of the efforts of all persons, whether connected with the Society or not, who, at any time, or in any degree, have contributed to make a knowledge of our Flora more complete. For all such assistance it has been intended that due credit should be given. But it would be unpardonable if the declaration were not here placed upon record, that to the tireless energy and zeal of the Society's first President, we are indebted for much the largest and most valuable part of the labors epitomized in the Catalogue. From the foundation of the Society until his recent removal from our city, Judge CLINTON freely gave to the exploration of our Flora, not only the assiduous attention of a profound and discriminating mind, but also such unremitting, physical labor as only the most devoted student of nature could have bestowed. By his hands, specimens of all the plants, except Algæ, here enumerated, as well as some 20,000 more, the product of other regions, procured by him for the Society, have been labeled and arranged in its botanical collections, henceforth, in grateful recognition of his services, to be known as "THE CLINTON HERBARIUM."

The City of Buffalo is situated at the foot of Lake Erie, in latitude 42° 52′ 46.26″ N., and longitude 1° 52′ 57.1″ W. of Washington:—the Lighthouse, at the mouth of Buffalo River, being taken as the point of observation. Its mean annual temperature, deduced from the daily observations of more than twenty years, is 48.39°, Fahrenheit. Its mean temperature for the summer months averages 68.80°, and for the winter months, 30.22°. Its changes of temperature, although somewhat sudden, are in fact neither as extreme nor as frequent as those of many places not very distant. Usually, in summer, Montreal and Quebec have warmer days, and in winter, St. Louis and Memphis, colder ones. Philadelphia, lying nearly 180 miles more southerly, has a higher annual temperature of only six degrees.

The cause of this equability of climate is easily discovered. Within the limits of Buffalo are eight miles of the shore of Lake Erie and Niagara River. The waters of the lake, warmed by the summer, later in the year impart their heat to the atmosphere, and thus for a while, retard the approach of winter. The same cause, acting in the opposite direction, delays the spring, (often for a considerable time), and always moderates the heat of summer. But these effects extend inland only a few miles.

The height of Lake Erie has been ascertained to be 573 feet above the ocean. The City of Buffalo nowhere occupies an elevation of more than 105 feet above the lake, and probably its average height does not exceed 30 feet. But at the distance of 20 or 30 miles to the east and south, the ground is much higher; and there, as might be expected, we find a much lower mean annual temperature. At Salamanca, in Cattaraugus County, distant 50 miles from Buffalo, the mean annual temperature is only 45°, Fahr.

For the last twenty-four years the average rain-fall at Buffalo has been 36.47 inches. But towards the south and southeast the usually lower temperature is accompanied by an increase in the annual rain-fall. At Salamanca, above mentioned, it is 44 inches. Whilst it may well be supposed that at all times, but especially in summer, the lake imparts to the atmosphere some degree of moisture, nevertheless, the climate at Buffalo, as compared with those of places not very remote, must be regarded as dry. It may be of interest to note that in Pennsylvania, and the middle and southerly

portions of New York and through nearly all New England, the annual rain-fall is from ten to fifteen inches greater.

The natural botanical district, in which the City of Buffalo is situated, is a part of the basin of Lake Erie. For the sake of convenience and distinction, it will here be called the ERIE DISTRICT.

Towards the south and southeast, it finds its boundaries in a range of highlands, distant from thirty to fifty miles from Buffalo, beyond which the streams flow into the Allegany, and thence into the Ohio and the Mississippi. These highlands constitute, in fact, a part of the northeasterly limits of the Mississippi Valley. That region, so far as it comes within the scope of the Catalogue, will be called the ALLEGANY DISTRICT.

In Chatauqua County, the limits of the Erie District are very narrow. Between Lake Erie and the head of Chatauqua Lake, the interval of land is but seven and a half miles wide. Here the dividing ridge approaches so near Lake Erie as to leave only a strip of land less than four miles in width. Yet the summit of the ridge is 891 feet above Lake Erie. Eastwardly its height increases. Between Chatauqua Lake and Connewango Creek the elevation is reached of 1401 feet, and between Connewango Creek and Ellicottville, that of 1570 feet. Upon the summit, in several places, a conglomerate of the coal period is found, *in place*. In Chatauqua County, almost upon the crest of the dividing land, a series of lakes appears. The largest of these is Chatauqua Lake, 726 feet above Lake Erie. Northerly and northeasterly from Chatauqua Lake are Bear, Cassadaga and Mud Lakes, respectively 755, 732 and 833 feet above Lake Erie, and as truly sources of the Mississippi as the far distant Itasca.

The easterly boundary of the Erie District is another range of highlands, which divides it from the basin of the Genesee River:—here termed the GENESEE DISTRICT. Towards the southeast these elevations meet and unite with those which separate the Erie from the Allegany District, and are as high. To the north they decline, but even at Batavia they have an elevation of about 300 feet above Lake Erie.

The northerly boundary of the Erie District is marked, both in New York and Canada, by that extraordinary exposure and elevation of rock, known in its vicinity as the "Mountain Ridge," and to which Canadian geologists have given the name of the "Niagara

Escarpment." Eastwardly, it is first observed in Monroe County, a few miles west of Rochester. From thence it extends westerly through the whole of Orleans and Niagara Counties, constituting their highest elevations. In Orleans County, Oak Orchard Creek and its tributaries, in their descent to Lake Ontario, flow over it in various places. Niagara River has excavated through it its stupendous chasm. In its westerly course, as well in New York as in Canada, it constantly rises. At Lewiston it is 374 feet above Lake Ontario, and at Ancaster, near Hamilton, it reaches the height of 510 feet. Almost from its very verge the surface of the ground, probably because of the dip of the subjacent rock, slopes southerly. North of the Mountain Ridge the surface descends rapidly, and an interval of comparatively level land, varying in width from one to fifteen miles, and lying at the average height of about 200 feet above Lake Ontario, is soon reached. Its level below Lake Erie is about 141 feet. This territory, whether easterly or westerly of Niagara River, may be properly called the ONTARIO DISTRICT.

The Catalogue presents the name of all the plants which have been detected within a radius of fifty miles of Buffalo, and satisfactorily identified. The selection of such extended limits for a local catalogue was controlled by the important considerations that a smaller territory would not have brought within its cognizance the extreme southeasterly portions of the Erie District, and would have excluded several localities of great botanical interest, to the exploration of which especial attention has been given :—among them the rich and attractive region at Portage and the Falls of the Genesee.

The altitudes of many of the places named in the Catalogue have been indicated upon the map which accompanies it. It is supposed that these will prove of no little interest. The statement that in respect to the growth of plants a higher elevation is equivalent to a higher latitude here meets with some note-worthy confirmations. The proposition has been more definitely embodied in the formula, (susceptible of easy mathematical demonstration), that, between latitudes 35 and 60, an elevation of three hundred feet is equal to one degree of north latitude. The higher portions of the Erie, Genesee and Allegany Districts, lying been the parallels of 42° 10′ and 42° 30′ N. latitude, reach a height varying from 1500 to 2300 feet above the sea. The temperature, then, of these places, should be equiva-

lent to that of places upon the sea-coast, situated from three hundred and fifty to five hundred miles further northward :—as far, in fact, as Vancouver's Island or the mouth of the St. Lawrence. And here, upon these elevations, are found many plants well recognized as of a northern character :—Among them *Viola Selkirkii*, *Cerastium boreale*, *Ledum latifolium*, *Saxifraga azoides*, *Petasites palmata*, *Primula Mistassinica* and *Pinguicula vulgaris*.

In obedience to the same law, the lower level of the Ontario District is accompanied by a higher mean temperature than that of the Erie District. To this result, however, the great depth of Lake Ontario, and its direction, east and west, largely contribute. Within its limits the springs are somewhat earlier and the winters more moderate. Fruits ripen which near Buffalo are precarious. Along the southern shore of the lake, but in places somewhat beyond the limits of the Catalogue, two plants appear, of such southern character as *Nelumbium luteum* and *Linobium Spongia*. *Asimima triloba* flourishes in several places in Orleans and Niagara Counties, and it is not unlikely that *Cercis Canadensis* was formerly native there.

It may be stated, as a general proposition, that whatever of variety there is in the Flora of Buffalo and its vicinity has resulted only in a small degree, if at all, from geological situation. In fact, the subjacent rocks have contributed to the soil but little, either by abrasion or decomposition. The diversified materials, of which it is composed (excepting, of course, vegetable mould and the ancient and modern deposits of the lake and river) are recognized as having been brought from the north during the glacial period. To the south and southeast, however, the shaly rocks of the Hamilton Group have yielded, in some places, an argillaceous quota to the soil.

A few localities within our limits deserve especial notice.

A little north of Salamanca, in Cattaraugus County, occupying the summit of one of the highest hills, at the altitude of 2250 feet above the sea, are the remains of a conglomerate rock, of carboniferous age. The stratum varies in thickness from ten to thirty feet. By the slow processes of time, or, possibly, the operations of a more active agent, the rock has been broken up into rectangular masses, varying greatly in size : these, separating from each other, have left passages between, in which the imagination may easily discover the streets

and avenues of an ancient and ruined city. Hence the name by which the place is known:—"Rock City." Here, in sheltered spots, the snow and ice sometimes remain all the year long. And here *Epigœa repens*, *Ilex monticola*, *Listera cordata*, the two *Clintonias*, and other plants delighting in a cool and moist atmosphere, luxuriate.

The lake shore, on either side, affords plants well recognized as maritime :—as, for example, *Cakile Americana*, *Lathyrus maritimus*, *Euphorbia polygonifolia*, and *Triplasis purpurea*. *Hudsonia tomentosa*, attributed to the shores of the great lakes, has not yet been seen. But with the others grow some plants, not known to inhabit the sea-coast, and not met with inland; such as *Artemisia Canadensis*, *Gly cyrrhiza lepidota* and *Corispermum hyssopifolium*. With us, *Ptelea trifoliata*, and *Juniperus communis* are always lake-shore plants; and *Lithospermum hirtum* is rarely met with elsewhere.

The atmosphere at the Falls of Niagara is charged, in an extraordinary degree, with moisture. The spray of the cataract, descending in some places in an incessant shower, produces a fitting habitat for several species of plants, elsewhere, rarely, if ever, seen within our limits. *Hypericum Kalmianum*, *Parnassia Caroliniana*, *Lobelia Kalmii*, *Campanula rotundifolia*, *Utricularia cornuta*, *Gentiana crinita*, *Carex Œderi*, *etc.*, here find congenial environment. At Portage, similar conditions sustain several of the same species, and beside them *Saxifraga aizoides*, *Primula Mistassinica* and *Pinguicula vulgaris*. In the gorge of both rivers, *Pterospora Andromedea* is found.

At Point Abino, on the Canadian shore of Lake Erie, at the distance of eleven miles from Buffalo, the sand of the beach has been drifted by the winds into dunes, sometimes a hundred feet in height, covered with trees of ancient growth. We have not met, in any other place, with *Corydalis flavula*, *Sisymbrium Thaliana*, the rose-colored *Arabis Drummondi*, nor, of late years, the most fragrant of our native plants, *Moneses uniflora*. Here, too, in the crevices of the corniferous limestone, lying but a little above the surface of the lake and kept constantly wet by its waters, *Linum striatum* is found, growing in abundance :—its only locality known in our vicinity. Near it occurs a form of *Hypericum Kalmianum*, with smaller corymbs, but larger flowers, than it produces at the Falls.

In the immediate vicinity of Buffalo only small patches of sphagnous bogs are found. But at the distance of ten or fifteen

miles, east or west, they are more frequently met with. In Chautauqua, Cattaraugus and Wyoming Counties they are abundant and sometimes of large dimensions. But the most extensive of those found east of Niagara River occur near the boundary line between Genesee and Orleans Counties, and have proved of peculiar interest. At Black Creek, in Canada, near where it enters Niagara River, a sphagnous swamp occurs, said to extend westward to Marshville, a distance of twenty-five miles. This, beyond question, is the largest one in our neighborhood. Along the lake shore, east of Point Abino, a small swamp of sphagnum is found which affords the nearest station of *Sarracenia purpurea*. While all these bogs present the same general characteristics, yet in the plants which they nourish there is considerable diversity. *Scheuzeria palustris* has been found in one at Hanover, Chautauqua County, and not elsewhere. *Microstylis monophyllos* and *Stellaria borealis* seem to occur only in a piece of wooded spagnum at Machias. *Andromeda polifolia* has been collected in an open bog at the same place, and in the one at Black Creek, but not elsewhere. *Lonicera oblongifolia* occurs in a marsh at Alabama, in Genesee County; and the marsh at Bergen, in the same county, alone, has yielded us *Cyprepedium candidum* and *Calypso borealis*:—of the latter, a solitary specimen. *Cypripedium arietinum*, diligently sought for in all these localities, has not yet been noticed.

That portion of the city which lies east of Delaware Street and north of Scajauquady's Creek, offers to the botanist a field of no little attraction. It early acquired the name of "Buffalo Plains." Here, throughout an extensive area, the corniferous limestone, occupying a position almost horizontal, approaches very near the surface. In places, the rock remains uncovered. But, notwithstanding the fact that the soil is very shallow, the region was once well-wooded; and it is still the home of some most interesting plants, rarely seen in other portions of our district. Among them may be named *Ranunculus fascicularis*, *Arabis perfolita*, *Viola palmata*, *Viola tenella*, *Ceanothus Americana*, *Staphylea trifolia*, *Saxifraga Virginiensis*, *Vaccineum stamineum*, *Pentstemon pubescens*, *Ipomœa pandurata*, *Frasera Carolinensis*, *Gentiana puberula*, *Asclepias tuberosa*, and *Scirpus Clintonii*. Its Sylva, also, has its peculiarities. Here, alone, we have met *Quercus Muhlenbergii*, *Q. prinoides* and

Ulmus racemosa. Nowhere else, with us, have *Quercus alba*, *Q. obtusiloba* and *Q. macrocarpa* appeared so abundantly.

The table, which is appended to the Catalogue, is designed to show, at one view, the number of genera and species in the several classes and orders of plants represented in our Flora. It will be seen that quite frequently one species is the sole representative of a genus or order, elsewhere in the world abundant and important. Especially is this true of the *Phænogamæ*. The entire number of species in that portion of the vegetable kingdom, included in the Catalogue, is 1,217, comprised in 106 orders. Of such species more than half the entire number belong to the following 10 orders:

Compositæ,	143 species.
Cyperaceæ,	105 species.
Graminæ,	88 species.
Rosaceæ,	52 species.
Leguminosæ,	45 species.
Menthaceæ,	39 species.
Ranunculaceæ,	36 species.
Cruciferæ,	36 species.
Orchidaceæ,	34 species.
Liliaceæ,	31 species.
In all,	609 species.

The largest genera, in the same division of plants, are *Carex*, containing 72 species; *Solidago*, 20 species; *Aster*, 19 species; *Polygonum*, 16 species; *Salix*, 14 species; *Potamogeton*, 12 species; *Viola*, 11 species, and *Habenaria*, 10 species. Of trees, the genus *Quercus* contains the greatest number of species:—nine.

But it ought not to be inferred that the large number of species, contained in a particular genus, is any indication that the plants of such genus are especially abundant. *Tilia Americana* and *Tsuga Canadensis* undoubtedly constituted a much larger share of our original forest than the nine species of oak taken altogether.

It would be very far from the truth to assert that the entire territory included within the limits of fifty miles from Buffalo has been fully explored, and all its floral treasures brought to light. Much of Wyoming and Genesee Counties remains to be examined. Except

near Niagara River very little has been done in the Ontario District. In that part of the Erie District which lies west of Niagara River many localities remain to be investigated. But it is very safe to say that all our characteristic flowering plants and all our more abundant cryptogams are named in the Catalogue. The species hereafter to be detected within our limits will probably be found in scanty numbers and inhabiting very narrow bounds.

The naturalized plants of Buffalo are a large and increasing number. In accordance with usage their names appear in the Catalogue in small capitals. Several of them are of recent introduction:—a few as garden escapes, but the larger number through the agency of the southern and western railways. It is doubtful whether all these strangers will long remain; but it may be said that, in case they should disappear, they are likely to be introduced again in the same way. But some of them manifest a wonderful capacity of persistence and increase;—notably, *Artemisia biennis* (with us uniformly an annual), which, twenty years ago, was a rare plant, but is now met with in superabundance.

Early in the history of the Society, the investigation of our Lichens was generously undertaken by Miss MARY L. WILSON, then of our city, now of Haverhill, Mass. The success which attended her efforts in this difficult and neglected field, is demonstrated by the very valuable collection of plants of that order, constituting a part of the Herbarium. Miss WILSON has now enhanced the value of her labors by preparing with her own hand the list of the Lichens of Buffalo which makes a part of the Catalogue.

It is confessed, with much regret, that the investigation of the Algæ of Buffalo has been greatly neglected. The list of them which appears in the Catalogue is from the very competent hands of Prof. DAVID S. KELLICOTT, of the State Normal School in this city. But, unfortunately, Prof. KELLICOTT has not been able to give to their study more than a small portion of his time, and that only during the last few seasons. It may, however, be confidently expected that, at no distant time, a revised list of the Algæ of Buffalo will be issued by the Society, with such extensions and corrections as, upon further research and examination, may appear necessary.

Grateful acknowledgments are made to Mr. CHARLES H. PECK, of Albany, N. Y., the State Botanist, for his kindness in supervising

and correcting our lists of Musci, Hepaticæ and Fungi:—originally prepared by Judge CLINTON, by whom all the species were detected, except as otherwise stated.

For the accompanying map we are indebted to Mr. JULIUS POHLMAN, Custodian of the Society, and to Mr. HENRY CHANDLER, of this city, who has generously assisted in the engraving of it. It is hoped that it will prove of use, not only at the present time, but in the future, as a guide to the localities in which some of the rarer and more interesting members of our Flora were detected. The altitudes, given upon the map, of various places named in the Catalogue, have been obtained in all instances from sources which, it was thought, could be relied upon. In the main, it is to be presumed that they are nearly, if not quite, accurate.

It will be seen that the names of a few species, which appear in the Catalogue, are not accompanied by numbers. In such instances the plants are mentioned either because they are known to have formerly existed in this vicinity, although they have now disappeared, or because there is evidence, more or less satisfactory, for believing that they actually belong to our Flora, and will yet be detected here. In any event, however, as they are not numbered, their inclusion in the Catalogue will not lead to any misapprehension.

Whenever any plant is named and its locality is not given it may be understood that the plant is one of general diffusion through our territory. When localities are given, they are mentioned in the order of their distance from Buffalo:—the nearest first. In all such cases it may be understood that the compiler has regarded them as among our rarities. All phænogamous plants and their stations are named upon the authority of his personal observation, except as otherwise stated. From this, however, it is not to be inferred that he claims to have been the discoverer of the species in the localities named. The fact is often to the contrary.

A word may be of use in explanation of the nomenclature adopted in the Catalogue. As a rule, the names of species are those employed by WATSON, in his "Bibliographical Index to North American Botany," so far as that valuable work has issued from the press. But where such names differ from those given by GRAY, in the fifth edition of his Manual, the latter will be found in parentheses. In a very few instances the compiler has ventured to differ

from both of these pre-eminent authorities, and has used the names applied by other botanists.

The fact is entitled to notice that now, probably for the first time in America, a local catalogue is published in which the plants of all the classes in the vegetable kingdom are included. Usually, heretofore, such catalogues have not extended beyond the Vascular Crytogams:—very rarely, indeed, have they comprehended the Musci and Hepaticæ.

No one more than the writer can regret that any reason should have compelled Judge CLINTON to decline the task of preparing this Catalogue for publication:—no one can better appreciate how much has been lost because that labor has devolved upon another. In this city, where that devoted naturalist and accomplished scholar passed so many years of his useful and honorable life, nothing needs to be said, to any one, of his peculiar fitness for such a duty. The clearness, learning and rare felicity of style, with which he was accustomed to illumine and adorn his favorite theme, will here be long remembered.

Buffalo, March 1st, 1882.

CATALOGUE.

SERIES I. PHÆNOGAMÆ.

CLASS I. EXOGENÆ.

SUBCLASS I. ANGIOSPERMÆ.

DIVISION I. POLYPETALÆ.

ORDER 1. RANUNCULACEÆ.

1. CLEMATIS, L.

1. **C. Virginiana,** L.

2. ANEMONE, L.

2. **A. cylindrica,** Gray.
   The Plains, Buffalo.
3. **A. Virginiana,** L.
4. **A. dichotoma,** L. (*A. Pennsylvanica,* L.)
5. **A. nemorosa,** L.
6. var. **quinquefolia,** DC.
7. **A. Hepatica,** L. (*Hepatica triloba, Chaix.*)
   Niagara Falls; Lewiston, Niagara Co.; Salamanca, Catt. Co.; Portage, Gen. Co. Common in the places named. Elsewhere not observed.
8. **A. acutiloba,** Lawson. (*Hepatica acutiloba,* DC.)
   The common "Hepatica" of Buffalo and its vicinity. Usually not found in company with *A. Hepatica.*

3. THALICTRUM, L.

9. **T. anemonoides,** Michx.
   Rare. Near Queenston, Ont.; Portage, Wyom. Co., *Clinton;* Jamestown, Chat. Co.
10. **T. dioicum,** L.
11. **T. Cornuti,** L.

4. ADONIS, L.

12. A. AUTUMNALIS, L. Spontaneous in gardens.

5. RANUNCULUS, L.

13. **R. aquatilis,** L. var. **trichophyllus,** Chaix.
    Niagara River.

14. **R. multifidus,** Pursh.
Rare. W. Seneca, Erie Co.; Lewiston, Niag. Co.

15. **R. alismæfolius,** Geyer.
Rare. Salamanca, Catt. Co., *Clinton.*

16. **R. Flammula,** L., var. **reptans.** Meyer.
Very rare. West shore of Strawberry Is., Niagara River.

17. **R. abortivus,** L.

18. **R. sceleratus,** L.
Rather rare. Black Rock; Scajauquady's Creek.

19 **R. recurvatus,** Poir.

20. **R. Pennsylvanicus,** L.
Not very common. Shore of Niagara River at Black Rock; Scajauquady's Creek.

21. **R. fascicularis,** Muhl.
Rather rare. Near the Park and Forest Lawn Cemetery; the Plains, Buffalo.

22. **R. repens,** L.
With us usually smooth; a pubescent form at Forestville, Chat. Co.; perhaps var. **Marylandicus,** Torr. and G.

23. R. ACRIS, L.

24. R. BULBOSUS, L. Rare. Introduced.

6. NIGELLA, L.

25. N. DAMASCENA, L. Spontaneous in gardens. And escaped, *Clinton.*

7. CALTHA, L.

26. **C. palustris,** L.

8. TROLLIUS, L.

27. **T. laxus,** Salisb.
Very rare. Near Batavia, Gen. Co., *J. S. Lewis;* Silver Lake, Wyom. Co., *Clinton;* near Portage, in Gen. Co.

9. COPTIS, SALISB.

28. **C. trifolia,** Salisb.

10. HELLEBORUS, L.

29. H. VIRIDIS, L.
Very rare. Along a railroad track near Salamanca, Catt. Co. Probably the outcast of a garden.

11. AQUILEGIA, Tourn.

30. **A. Canadensis,** L.

31. A. VULGARIS, L.
Rare. Water Valley, Erie Co.—A white variety, which seems here, as elsewhere in the State, more disposed to persist than the blue or purple sort.

12. DELPHINIUM, Tourn.

32. D. CONSOLIDA, L.

Spontaneous in gardens and occasionally escaping.

13. HYDRASTIS, L.

33. **H. Canadensis,** L.

Very rare. Near Smoke's Creek, West Seneca, Erie Co.; Cayuga Is., Niagara River, *Clinton;* Medina, Orleans Co., *Dr. Hugo Schmidt;* Niagara Co., *Knieskern.*

14. ACTÆA, L.

34. **A. spicata,** L., var. **rubra,** Ait.

35. **A. alba,** Bigelow.

15. CIMICIFUGA, L.

36. **C. racemosa,** Nutt.

Rather rare. Squaw Is., Niagara River; W. Seneca, Erie Co.; Silver Lake, Wyom. Co.

ORDER 2. MAGNOLIACEÆ.

16. MAGNOLIA, L.

37. **M. acuminata,** L.

Rare. Forest Lawn Cemetery, Buffalo; Abbott's Corners, Erie Co.; Niagara Co., *Knieskern;* Hanover, Chat. Co.

17. LIRIODENDRON, L.

38. **L. tulipifera,** L.

Now rather rare. Formerly abundant.

ORDER 3. ANONACEÆ.

18. ASIMINA, Adans.

39. **A. triloba,** Dunal.

Very rare. Sturgeon Pt., Erie Co., *C. H. Williams;* Lockport and Middleport, Niag. Co., *James Hall;* mouth of Chatauqua Creek, *Knieskern;* Medina, Orleans Co., *Dr. Hugo Schmidt.*

ORDER 4. MENISPERMACEÆ.

19. MENISPERMUM, L.

40. **M. Canadenese,** L.

ORDER 5. BERBERIDACEÆ.

20. BERBERIS, L.

41. B. VULGARIS, L.

Rare. Goat Island, Niagara Falls.

21. CAULOPHYLLUM, Michx.

42. **C. thalictroides,** Michx.

22. JEFFERSONIA, Barton.

43. **J. diphylla,** Pers.

Very rare. Near Niagara Falls, *Clinton.*

23 PODOPHYLLUM, L.

44. **P. peltatum,** L.

ORDER 6. NYMPHÆACEÆ

24. BRASENIA, Schreber.

45. **B. peltata,** Pursh.

Rare. Black Creek, Ont., *Clinton;* Machias, Catt. Co; Cassadaga L., Chat. Co.

NELUMBIUM, Juss.

N. luteum, Willd.

It seems entirely certain, from the report of *J. F. Cowell,* that this rare and remarkable water-lily grows near Burnham's Is., in Grand River, a few miles from Dunnville, Ont.

25. NYMPHÆA, L.

N. odorata, Ait.

A pink flowering water-lily, probably this species, is reported by Miss *Ella M. Evry* to have been gathered at Cassadaga L., Chat. Co. "Inland Lakes, Chat. Co.," *E. S. Burgess.*

46. **N. tuberosa,** Paine.

26 NUPHAR, Smith.

47. **N. advena,** Ait.

ORDER 7. SARRACENIACEÆ.

27. SARRACENIA, Tourn.

48. **S. purpurea,** L.

Rather rare. Pt. Abino, Ont.; Villanova, Chat. Co.; Bergen, Gen. Co.; Machias, Catt. Co.; Java, Wyom. Co.; near Port Colborne, Ont., and elsewhere.

ORDER 8. PAPAVERACEÆ.

28. PAPAVER, L.

49. P. SOMNIFERUM, L.

Spontaneous in gardens, and sometimes escaping.

50. P. RHŒAS, L.

Spontaneous in gardens.

29. ARGEMONE, L.

51. A. MEXICANA, L.

Rare. Roadsides; near the Cattle-yards at East Buffalo; spontaneous in gardens.

30. CHELIDONIUM, L.

52. C. MAJUS, L.

Common at Pt. Abino, Ont., elsewhere scarce.

31. SANGUINARIA, Dill.

53. **S. canadensis,** L.

Rarely with four petals!

ORDER 9. FUMARIACEÆ.

32. ADLUMIA, Raf.

54. **A. cirrhosa,** Raf.

Very rare. "Counterfeiter's Ledge," near Akron, Erie Co; One specimen was found growing on the Plains, Buffalo, and another at Ft. Erie, Ont.

33. DICLYTRA, Borkh.

55. **D. cucullaria,** DC. (*Dicentra cucullaria*, DC.)

Rather rare. W. Seneca, Erie Co.; Goat Is., Niagara Falls; Hanover, Chat. Co.

56. **D. Canadensis,** DC. (*Dicentra canadensis*, DC.)

Rather rare. Growing with *D. cucullaria*, but more uncommon.

34. CORYDALIS, Vent.

57. **C. glauca,** Pursh.

Very rare. Tonawanda, Niag. Co., *Clinton;* near Akron, Erie Co.

58. **C. flavula,** Raf.

Very rare. Pt. Abino, Ont.

35. FUMARIA, L.

59. F. OFFICINALIS, L.

A very rare garden weed.

ORDER 10. CRUCIFERÆ.

36. NASTURTIUM, L.

60. N. OFFICINALE, R. Br.

Rather rare. Scajauquady's Cr., Buffalo, *W. J. Palmer;* Niagara Falls, near Table Rock, *Clinton;* Caledonia, Liv. Co.

61. **N. palustre,** DC.

62. **N. lacustre,** Gray.

Rare. Niagara River, *Clinton;* Scajauquady's Creek, Buffalo;—the station now included in the Park, and obliterated.

63. N. AMORACIA, Fries.

37. DENTARIA, L.

64. **D. diphylla,** Nichx.

Rather rare. W. Seneca, Erie Co.; Hanover, Chat. Co.; Goat Is., Niagara Falls, and elsewhere.

65. **D. maxima,** Nutt.

Rare. Angola, Erie Co., *Clinton.*

66. **D. laciniata,** Muhl.

38. CARDAMINE, L.

67. **C. rhomboidea,** DC.

Rather rare. Scajauquady's Creek, Buffalo; Pine Hill, Cheektowaga, Erie Co.; W. Seneca, Erie Co. (the station destroyed.)

68. **C. rotundifolia,** Michx. ? (*C. rhomboidea,* DC. var. *purpurea,* Torr.)

Our plant does not agree with the description of *C. rotundifolia* in Gray's Manual, nor with specimens from Penn. Nor is the plant likely to be *C. purpurea,* Cham & Schlecht., which seems to be a species growing far northward. In giving it Michaux's name, we follow Watson, but with much doubt.

69. **C. pratensis,** L.

Rare. S. E. portion of Buffalo, near W. Seneca.

70. **C. hirsuta,** L.

71. var. **sylvatica.**

39. HESPERIS, L.

72. H. MATRONALIS, L.

Spontaneous in gardens, and naturalized in some places.

40. ARABIS, L.

73. **A. lyrata,** L.

Rather rare. Niagara Falls; Ft. Erie, Ont.; Pt. Abino, Ont.

74. **A. dentata,** Torr. and Gray.

Very rare. Eighteen-mile Cr., Evans, Erie Co., *Clinton.*

75. **A. hirsuta,** Scop.

Rare. Near whirlpool, on either side of Niagara R.; near Gowanda, Erie Co.

76. **A. lævigata,** Poir.

Rather rare. Forest Lawn Cemetery, Buffalo; Pt. Abino, Ont.

77. **A. Canadensis,** L.

78. **A. perfoliata,** Lam.

Rare. Near Forest Lawn Cemetery, Buffalo.

79. **A. Drummondii,** Gray.

Rare. Lewiston, Niag. Co.; Pt. Abino, Ont. The Lewiston plants, white-flowering: the Pt. Abino ones, pink.

41. BARBAREA, L.

80. **B. vulgaris,** R. Br.

42. ERYSIMUM, L.

81. **E. chieranthoides,** L.

Rather rare. West Seneca, Erie Co.; Mud Lake, Villanova, Chat. Co., and elsewhere.

43. SISYMBRIUM, L.

82. S. OFFICINALE, Scop.

83. S. THALIANA, Gay.

Pt. Abino, Ont. There abundant. Elsewhere not seen.

S. canescens, Nutt.

Very rare. It seems quite certain that a cruciferous plant, recently detected by members of the "Buffalo Field Club," at the Falls of Tonawanda River, in Corfu, Gen. Co., will prove to be of this species.

44. BRASSICA, L.

84. B. SINAPISTRUM, Bossier.

85. B. NIGRA, Gray.

86. B. CAMPESTRIS, L.

Rather rare. To be regarded as accidental.

87. B. RAPA, L.

Often spontaneous where "bird seed" has been scattered.

45. DRABA, L.

88. **D. arabisans,** Michx.

Very rare. "Counterfeiter's Ledge," near Akron, Erie Co.

D. VERNA, L.

Introduced at Buffalo and Goat Is., Niagara Falls. Hardly yet established.

46. ALYSSUM, Tourn.

89. A. CALYCINUM, L.

Rare. Near Brock's Monument, Queenston, Ont.; introduced near Forest Lawn Cemetery, Buffalo.

47. CAMELINA, Crantz.

90. C. SATIVA, Crantz.

Rare. Track of the L. S. & M. S. R. R., Buffalo. Not seen of late.

48. CAPSELLA, Vent.

91. C. BURSA-PASTORIS, Moensch.

49. THLASPI, Tourn.

92. T. ARVENSIS, L.
Rare. Track of the Erie Railway, at Dayton, Catt. Co.

50. LEPIDIUM, L.

93. **L. Virginicum,** L.

94. **L. intermedium,** Gray.
Rare. Track of the Niagara Falls Railroad, near the shore of Niagara R., Buffalo, *Clinton*. Not seen elsewhere.

51. CAKILE, Tourn.

95. **C. Americana,** Nutt.
Shore of Lake Erie. Not abundant.

ORDER 11. CAPSARIDACEÆ.

52. POLANISIA, Raf.

96. **P. graveolens,** Raf.
A lake shore plant.

53. CLEOME, L.

97. C. INTEGRIFOLIA, Torr. & Gray.
Spontaneous in gardens, and escaping.

ORDER 12. RESEDACEÆ.

54. RESEDA, L.

98. R. ALBA, L.
Spontaneous in gardens, and escaping.

ORDER 13. VIOLACEÆ.

55. IONIDIUM, Vent.

99. **I. concolor,** Benth & Hook. (*Solea concolor*, Ging.)
Rare. Along the descent to Foster's Flat, near Queenston, Ont.

56. VIOLA, L.

100. **V. rotundifolia,** Michx.
Rather rare. In deep woods in south part of Erie Co.; Hanover, Chat. Co.

101. **V. blanda,** Willd.

102. V. ODORATA, L.
Spontaneous in gardens and occasionally escaping.

103. **V. Selkirkii,** Pursh.
Rare. Collins, Erie Co.; Hanover, Chat. Co.

104. **V. Cucullata,** Ait.
The variety, **longipes,** Peck, has been noticed in woods near the Sulphur Springs, W. Seneca, Erie Co.

105. **V. palmata,** L. (*V. Cucullata,* Ait, var. *palmata,* Gray.)
Rare. In woods, Plains, Buffalo.

106. **V. canina,** L., var. **sylvestris,** Regel.

107. **V. rostrata,** Muhl.

108. **V. striata,** Ait.
Rare. Smoke's Cr., W. Seneca, Erie Co.; near Irving, Chat. Co.

109. **V. Canadensis,** L.
A fragrant violet.

110. **V. pubescens,** Ait.

111. var. **eriocarpa,** Nutt.

112. **V. tenella,** Muhl. (*V. tricolor,* L. var. *arvensis, Ging.*)
Rare. Near the Park, east and west of Main street, Buffalo. We follow Hooker in regarding this plant as distinct from *V. tricolor.*

Order 14. Cistaceæ.

57. HELIANTHEMUM, Tourn.

113. **H. Canadense,** Michx.
Rather rare. The Plains, Buffalo.

58. LECHEA, L.

114. **L. major,** Michx.
Rare. The Plains, Buffalo; Grand Is., Niagara River.

115. **L. minor,** Michx.
Rare. The Plains, Buffalo.

Order 15. Droseraceæ.

59. DROSERA, L.

116. **D. rotundifolia,** L.
Rather rare. Pine Hill, Cheektowaga, Erie Co.; Pt. Abino, Ont.; Hanover, Chat. Co.; Machias, Catt. Co.

Order 16. Hypericaceæ.

60. HYPERICUM, L.

117. **H. pyramidatum,** Ait.
Very rare. Grand Is., Erie Co.

118. **H. Kalmianum,** L.

Very rare. Goat Is., Niagara Falls; Pt. Abino, Ont. The plant at Pt. Abino produces fewer but larger flowers than the one at the Falls.

119. H. PERFORATUM, L.

120. **H. corymbosum,** Muhl.

121. **H. mutilum,** L.

61. ELODES, Adans.

122. **E. Virginica,** Nutt.

ORDER 17. CARYOPHYLLACEÆ.

62. DIANTHUS, L.

123. D. ARMERIA.

Rare. Niagara Falls, Ont., *Clinton.*

63. SAPONARIA, L.

124. S. OFFICINALIS, L.

64. VACCARIA, Medik.

125. V. VULGARIS, Host.

Rare. A few plants only have been seen, Buffalo.

65. SILENE, L.

126. **S. stellata,** Ait.

Rare. Portage, Wyom. Co., *Clinton;* Bemus Pt., Chat. Co.

127. S. INFLATA, Smith.

Rare. Near Sulphur Spring, W. Seneca, Erie Co., *Clinton;* Pt. Abino, Ont. Sometimes dicœcious.

128. S. ARMERIA, L.

Spontaneous in gardens and sometimes escaping.

129. **S. antirrhina,** L.

130. S. GALLICA, L.

A rare garden weed, Buffalo, equivalent, according to Watson, to *S. quinquevulnera, L.*

131. S. NOTURNA, L.

Very rare. A single plant noticed in a roadside at Ft. Erie, Ont., in 1880.

132. S. NOCTIFLORA, L.

66. LYCHNIS, L.

133. L. GITHAGO, Lam.

134. L. CORONARIA, L.

Spontaneous in gardens, Buffalo.

67. ARENARIA, L.

135. A. SERPYLLIFOLIA, L.
136. **A. lateriflora,** L.

68. STELLARIA, L.

137. S. MEDIA, Smith.
138. **S. longifolia,** Muhl.
139. **S. borealis,** Bigelow.
Rare. Only seen at Machias, Catt. Co.

69. CERASTIUM, L.

140. C. VULGATUM, L.
141. C. VISCOSUM, L.
142. **C. nutans,** Raf.
Rather rare. West Seneca and elsewhere. A form with apetalous flowers found in the northeastern portion of Buffalo.
143. **C. arvense,** L.
Rare. Near the whirlpool, on both sides of Niagara River; near Foster's Flat, Ont.

70. SPERGULA, L.

144. S. ARVENSIS, L.
Rare. A weed in gardens, Buffalo; Hanover, Chat. Co.

71. MOLLUGO, L.

145. **M. verticillata,** L.
Rare. Ft. Erie, Ont.

ORDER 18. PORTULACACEÆ.

72. PORTULACA, Tourn.

146. P. OLERACEA, L.
147. P. GRANDIFLORA, Hook.
Spontaneous in gardens and sometimes escaping, Buffalo.

73. CLAYTONIA, L.

148. **C. Virginica,** L.
149. **C. Caroliniana,** L.

ORDER 19. MALVACEÆ.

74. ALTHEA, L.

150. A. ROSEA, L.
Occasionally escaped from gardens, Buffalo, and elsewhere.

75. MALVA, L.

151. M. ROTUNDIFOLIA, L.

152. M. SYLVESTRIS, L.
M. CRISPA, L.
Formerly not an uncommon weed in gardens, in Buffalo, but of late not often seen.

153. M. ALCEA, L.
Rare. Established along Main street, between Buffalo and Williamsville.

154. M. MOSCHATA, L.

76. SIDA, L.

155. S. SPINOSA, L.
Rare. Near the track of L. S. & M. S. R. R., at the Elk street crossing, Buffalo, *Clinton*.

77. ABUTILON, Tourn.

156. A. AVICENNÆ, Gærtn.

78. HIBISCUS, L.

157. **H. Moscheutos,** L.
Rare. Squaw Is., Niagara River, near Buffalo. Low grounds in W. Seneca, near the lake shore, *Clinton*.

158. H. TRIONUM, L.

ORDER 20. TILIACEÆ.

79. TILIA, L.

159. **T. Americana,** L.
The basswood seems to have formed a very considerable portion of the original forest, growing on the site of the City of Buffalo, before its settlement. (Michaux's *North American Sylva*, Vol. iii., p. 132.)

ORDER 21. LINACEÆ.

80. LINUM, L.

160. **L. Virginianum,** L.
Rather rare. The Plains, Buffalo; near Sulphur Spring, W. Seneca, Erie Co.

161. **L. striatum,** Walt.
Very rare. Plants, probably of this species, were found growing in the crevices of the rock, on the shore of the lake, at Pt. Abino, Ont., 1881.

162. L. USITATISSIMUM, L.
Occasionally escaping from cultivation.

Order 22. Geraniaceæ.

81. GERANIUM, L.

163. **G. maculatum**, L.

164. **G. Carolinianum**, L.
Rather rare. The Plains, Buffalo.

165. G. DISSECTUM, L.
Rare. The Plains, Buffalo. Apparently native; not lately met with.

166. G. COLUMBINUM, L.
A rare garden weed, Buffalo.

167. G. PUSILLUM, L.
A rare garden weed, Buffalo.

168. **G. Robertianum**, L.
Rather rare. Pt. Abino, Ont.; Goat Is., and elsewhere.

82. FLŒRKIA, Willd.

169. **F. proserpinacoides**, Willd.

83. IMPATIENS, L.

170. **I. pallida**, Nutt.

171. I. fulva, Nutt.

84. OXALIS, L.

172. **O. Acetosella**, L.
Rather rare. Southern part of Erie Co.; Hanover, Chat. Co.; Java, Wyom. Co.

173. **O. stricta**, L.

174. O. CORNICULATA, L.
A rather common green-house weed.

Order 23. Rutaceæ.

85. XANTHOXYLUM, Colden.

175. **X. Americanum**, Mill.
Rather rare. Ft. Erie, Ont.; Grand Is., Niagara R., *Clinton*.

86. PTELEA, L.

176. **P. trifoliata**, L.
Rare. Near Ft. Erie, Ont.; on the shore of L. Erie, in W. Seneca, Erie Co.; and in Evans, Erie Co.

Order 24. Simarubaceæ.

87. AILANTHUS, Desf.

177. A. GLANDULOSUS, Desf.
Self-planted in Forest Lawn Cemetery and elsewhere in Buffalo.

Order 25. Anacardiaceæ.

88. RHUS, L.

178. **R. typhina,** L.

179. **R. glabra,** L.

Rare. The Plains, Buffalo.

180. **R. venenata,** DC.

Rather rare. W. Seneca, Erie Co.; near Akron, Erie Co.; near Port Colborne, Ont.; Caledonia, Liv. Co.

181. **R. Toxicodendron,** L.

Rather rare. The Plains, Buffalo.

var. **radicans,** Torr.

182. **R. aromatica,** Ait.

Rare. Near the whirlpool, on both sides of Niagara R.; near Youngstown, Niagara Co.

Order 26. Vitaceæ.

89. VITIS, L.

183. **V. Labrusca,** L.

Rather Rare. Niagara Falls.

184. **V. æstivalis,** Michx.

185. **V. cordifolia,** Lam.

90. AMPELOPSIS, L.

186. **A. quinquefolia,** Michx.

Order 27. Rhamnaceæ.

RHAMNUS, L.

187. **R. alnifolia,** L'Her.

Rare. Scajauquady's Cr., within the Park, Buffalo; the station now obliterated; Hamburgh, Erie Co.; Alden, Erie Co.; Bergen, Gen. Co.

92. CEANOTHUS, L.

188. **C. Americanus,** L.

Rather rare. The Plains, Buffalo.

Order 28. Celastraceæ.

93. CELASTRUS, L.

189. **C. scandens,** L.

94. EUONYMUS, Tourn.

190. **E. atropurpureus,** Jacq.
Forest Lawn Cemetery, and the Plains, Buffalo; Goat Is., Niagara Falls.

191. **E. Americanus,** L.

192. var. **oboratus,** Torr. & Gray.
W. Seneca, Erie Co.; Hanover, Chat. Co.

ORDER 29. SAPINDACEÆ.

95. STAPHYLEA, L.

193. **S. trifolia,** L.
Rare. The Plains, Buffalo; West Seneca, Erie Co.

96. ACER, L.

194. **A. Pennsylvanicum,** L.
Southern part of Erie Co., and throughout the Alleghany Dist.

195. **A. spicatum,** Lam.

196. **A. saccharinum,** Wang.

197. var. **nigrum,** Torr. & Gray.

198. **A. dasycarpum,** Ehrhart.

199. **A. rubrum,** L.

ORDER 30. POLYGALACEÆ.

97. POLYGALA, Tourn.

200. **P. verticillata,** L.
Rather rare. The Plains, Buffalo.

201. **P. Senega,** L.
Rather rare. The Plains, Buffalo. The broader leaved form (var. **latifolia,** Torr. and Gray), near the whirlpool, Ont.

202. **P. paucifolia,** Willd.
Rare. Eighteen-mile Creek, Erie Co.; Portage, Wyom. Co.

ORDER 31. LEGUMINOSÆ.

98. LUPINUS, L.

203. **L. perennis,** L.
Rather rare. Northeastern portion of Buffalo, but the station now exhausted. Near Akron, Erie Co.; along the track of the N. Y. C. & H. R. R. R., east of Batavia, Gen. Co.; near Queenston, Ont.; Silver Lake, Wyom. Co., *Clinton;* Salamanca, Catt. Co., *Clinton.*

99. TRIFOLIUM, L.

204. T. ARVENSE, L.
Rare. Near Lewiston, Niag. Co.

205. T. PRATENSE, L.

206. T. REPENS, L.

207. T. HYBRIDUM, L.
Rare. Delaware street, near the Park, Buffalo; near Warsaw, Wyom. Co., *Clinton*.

208. T. PROCUMBENS, L.
Rare. Clifton, Ont.

100. MELILOTUS, Tourn.

209. M. OFFICINALIS, Willd.
Rather rare. Near Ft. Porter, Buffalo; Grand Is., Niagara R.

210. M. ALBA, Lam.

101. MEDICAGO, L.

211. M. SATIVA, L.
Occasionally spontaneous.

212. M, LUPULINA, L.

102 ROBINIA, L.

213. **R. Pseudacacia**, L.
Naturalized. Tonawanda Is., Niagara R., and elsewhere.

214. **R. viscosa**, Vent.
Naturalized. Old cemetery between North and Best streets, Buffalo, and elsewhere.

103. ASTRAGALUS, L.

215. **A. Canadensis**, L.
Not common. Squaw Is., Niagara R.; Strawberry Is., Niagara R., and elsewhere.

216. **A. Cooperi**, Gray.
Rather rare. Strawberry Is., Niagara R., Erie Co.; Niagara Falls.

104. GLYCYRRHIZA, Tourn.

217. **G. lepidota**, Nutt.
Very rare. Established on a sand-dune above Ft. Erie, Ont. Probably introduced from the west by the Indians.

105. DESMODIUM, DC.

218. **D. nudiflorum**, DC.

219. **D. acuminatum**, DC.

220. **D. rotundifolium,** DC.
The Plains, Buffalo.

221. **D. canescens,** DC.
The Plains, Buffalo.

222. **D. cuspidatum,** Hook.

223. **D. Dillenii,** Darl.
Whirlpool woods, Niagara R., American side.

224. **D. paniculatum,** DC.

225. **D. Canadense,** DC.

226. **D. rigidum,** DC.

227. **D. Marilandicum,** Boott.
The Plains, Buffalo.

106. LESPEDEZA, Michx.

228. **L. violacea,** Pers.

229. var. **sessiliflora.**
The Plains, Buffalo.

230. **L. hirta,** Ell.
The Plains, Buffalo.

231. **L. capitata,** Michx.
The Plains, Buffalo.

107. ONOBRYCHIS, Tourn.

232. O. SATIVA, Lam.
Rare. Pt. Abino, Ont.

108. VICIA, Tourn.

233. V. SATIVA, L.
Rather rare. Black Rock Dam, Buffalo.

234. V. CRACCA, L.
Rather rare. A garden weed, Buffalo; Hanover, Chat. Co.

235. **V. Caroliniana,** Walt.

236. **V. Americana,** Muhl.

109. LATHYRUS, L.

237. **L. maritimus,** Bigelow.

238. **L. ochroleucus,** Hook.

239. **L. paluster,** L.

240. var. **myrtifolius,** Gray.

241. L. PRATENSIS. L.
A rare garden weed, Buffalo.

110. APIOS, Bœrhaave.

242. **A. tuberosa,** Mœnch.

111. AMPHICARPEA, Ell.

243. **A. monoica,** Nutt.

112. BAPTISIA, Vent.

244. **B. tinctoria,** R. Br.

Rare. Salamanca, *Clinton.*

CERCIS, L.

C. Canadensis, L. Torrey, in his Flora of the State, mentions having received specimens from Dr. Kennicott, of Buffalo, collected, as he thought, near Lewiston; but he says they might not have been native. Not seen by us.

113. CASSIA, L.

245. **C. Marilandica,** L.

Very rare. Evans, Erie Co.

246. **C. Chamæcrista,** L.

Very rare. A single specimen collected from the track of the L. S. & M. S. R. R., near Angola, Erie Co., by *Chas. Linden.* But spontaneous in gardens, Buffalo.

114. GLEDITSCHIA, L.

247. **G. triacanthos,** L.

Occasionally spontaneous.

ORDER 22. ROSACEÆ.

115. PRUNUS, Tourn.

248. **P. Americana,** Marshall.

249. **P. Pennsylvanica,** L.

250. P. CERASUS, L.

Often spontaneous along fences and roadsides.

251. **P. Virginiana,** L.

252. **P. serotina,** Ehrhart.

116. AMYGDALUS, Tourn.

253. A. PERSICA, L.

Often spontaneous and occasionally fruiting without cultivation or protection.

117. SPIRÆA, L.

254. **S. salicifolia,** L.

118. NEILLIA, Don.

255. **N. opulifolia,** Bent. & Hook.

Rather rare. Strawberry Is., Grand Is., Niagara R.; Pt. Abino, Ont.

GILLENIA, Mœnch.

G. trifoliata, Mœnch.

Rare. Jamestown, Chat. Co., *Clinton*. Likely to be found within our limits.

119. POTERIUM, L.

256. **P. Canadense,** Benth. & Hook.

Rare. Clear Creek, Catt. Co.

120. AGRIMONIA, Tourn.

257. **A. Eupatoria,** L.

121. GEUM, L.

258. **G. album,** Gmelin.

259. **G. Virginianum,** L.

260. **G. macrophyllum,** Willd.

Rare. Hamburgh, Erie Co.

261. **G. strictum,** Ait.

262. **G. rivale,** L.

122. WALDSTEINIA., Willd.

263. **W. fragarioides,** Traut.

123. POTENTILLA, L.

264. **P. Norvegica,** L.

265. **P. supina, L.** (*P. paradoxa, Nutt.*)

Rare. "On the sand-bar separating Four-mile Run Pond from the Lake," Ont.; *Clinton.*

266. **P. Canadensis,** L.

267. **P. argentea,** L.

Abundant on the Plains, Buffalo, elsewhere not frequent.

268. P. RECTA, L. An occasional weed, Buffalo.

269. **P. arguta,** Pursh.

Rare. Two plants found on a high, gravelly knoll, near Cherry Cr., Catt. Co.

270. **P. Anserina,**L.

271. **P. fruticosa,** L.

Rather rare. Pt. Abino, Ont.; near Pt. Colborne, Ont.; Bergen, Gen. Co.; Caledonia, Liv. Co.

272. **P. palustris,** Scop.

Rather rare. On the shore of Niagara R., Buffalo, between Black Rock and Tonawanda, *J. F. Cowell;* Cayuga Is., Niagara R., *Clinton;* Pt. Abino, Ont.; near Akron, Erie Co.; Bergen, Gen. Co.; Port Colborne, Ont.

124. FRAGARIA, Tourn.

273. **F. Virginiana,** Duchesne.
274. **F. vesca,** L.

125. RUBUS, Tourn.

275. **R. Dalibarda,** L.
276. **R. odoratus,** L.
277. **R. triflorus,** Richardson.
278. **R. strigosus,** Michx.
279. **R. occidentalis,** L.
280. **R. villosus,** Ait.
281. **R. Canadensis,** L.
Rather rare. The Plains, Buffalo.

282. **R. hispidus,** L.

126. ROSA, Tour.

283. **R. setigera,** Michx.
Rare. Woods east of Delaware street, beyond the Park, Buffalo.

284. **R. Carolina,** D.
285. **R. parviflora,** Ehrhart. (*Rosa lucida*, Ehrh.)
286. **R. blanda,** Ait.
287. R. RUBIGINOSA, L.
288. R. MICRANTHA, Smith.
Rare. Oak Orchard Creek, near Medina, Orl. Co., *Clinton.*

289. R. SPINOSISSIMA, L.
Rare. Along a road-side on the Plains, Buffalo. Doubtless an escape.

127. CRATÆGUS, L.

290. C. OXYCANTHA, L.
Occasionally spontaneous.

291. **C. coccinea,** L.
292. **C. tomentosa,** L.
293. **C. Crus-galli,** L.

128. PYRUS, L.

294. P. MALUS, L.
Rather rare. Large trees, perhaps planted, are growing in woods on Grand Is., Niagara R., near Sheenwater; elsewhere sometimes spontaneous.

295. P. COMMUNIS, L.
Grand Is. Less common than *P. Malus.*

296. **P. coronaria,** L.

Not uncommon. Cheektowaga, the name of one of the towns of Erie Co., signifies in the Seneca language, according to *O. H. Marshall*, Esq., of Buffalo, "the place of crab-apples." Plentiful on the Plains, Buffalo, and at Portage, Wyom. and Liv. Cos.

297. **P. arbutifolia,** var. **melanocarpa,** Gray.

298. **P. Americana,** DC.

Rare. Machias, Catt. Co., "Rock City," Little Valley, Catt. Co.; Panama, Chat. Co., *Clinton.*

129. AMELANCHIER, Medik.

299. **A. Canadensis,** Torr. & Gray.

Order 33. Saxifragaceæ.

130. RIBES, L.

300. **R. Cynosbati,** L.

301. **R. oxyacanthoides,** L. (*R. hirtellum*, Michx.)

302. **R. prostratum,** L'Her.

Rare. Hanover, Chat. Co.; Dayton, Catt. Co.

303. **R. floridum,** L'Her.

304. **R. rubrum,** L., var. **subglandulosum,** Maxim.

Rare. In Buffalo Park, where "The Lake" now is; the station obliterated. Hamburgh, Erie Co.; Jamestown, Chat. Co., *Clinton;* Westfield, Chat. Co., *Clinton.*

131. PARNASSIA, Tourn.

305. **P. Caroliniana,** Michx.

Rather rare. Strawberry Is., Niagara R.; Wind-mill Pt., Ont.; Goat Is., Niagara Falls; Bergen, Gen. Co.

132. SAXIFRAGA, L.

306. **S. aizoides,** L.

Very rare. Falls of the Genesee River, Portage, Wyom. Co.

307. **S. Virginiensis** Michx.

308. **S. Pennsylvanica,** L.

133. MITELLA, L.

309. **M. diphylla,** Tourn.

310. **M. nuda,** L.

Rare. Near Black Creek, Ont., *Clinton;* Bergen, Gen. Co.; Machias, Catt. Co.; Caledonia, Liv. Co., *Clinton.*

134. TIARELLA, L.

311. **T. cordifolia,** L.

135. CHRYSOSPLENIUM, Tourn.

312. **C. Americanum,** Schwein.

Order 34. Crassulaceæ.

136. PENTHORUM, Gronov.

313. **P. sedoides,** L.

137. SEDUM, Tourn.

314. S. ACRE, L.

Rather rare. Niagara Falls; Williamsville, Erie Co., and elsewhere.

315. S. TELEPHIUM, L.

Rather rare. Machias, Catt. Co., and elsewhere.

Order 35. Hamamelaceæ.

138. HAMAMELIS, L.

316. **H. Virginica,** L.

Order 36. Halorageæ.

139. MYRIOPHYLLUM, Vaill.

317. **M. spicatum,** L.

318. **M. verticillatum,** L.

Rare. Squaw Is., Niagara R.

319. **M. heterophyllum,** Michx.

Rare. Strawberry Is., Niagara R., *Clinton.*

140. PROSERPINACA, L.

320. **P. palustris,** L.

Rare. Shore of Lake Erie, Buffalo; Chatauqua Lake, at "The Narrows."

Order 37. Onagraceæ.

141. CIRCÆA, Tourn.

321. **C. Lutetiana,** L.

322. **C. alpina,** L.

142. GAURA, L.

323. **G. biennis.**, L.
Rare. Sulphur Springs, Cheektowaga, Erie Co.; near Ft. Erie, Ont.

143. EPILOBIUM, L.

324. **E. spicatum**, Lam. (*E. angustifolium*, L., var. *b.*)
325. **E. palustre.**, var. **lineare**, Gray.
326. **E. molle**, Torr.
327. **E. coloratum**, Muhl.

144. ŒNOTHERA, L.

328. **O. biennis**, L.
329. var. **muricata**, Lindl.
330. **O. pumila**, L.

145. LUDWIGIA, L.

331. **L. palustris**, Ell.

Order 38. Lythraceæ.

146. LYTHRUM, L.

332. **L. alatum**, Pursh.
Rare. Near the track of the B. & S. W. R. R., W. Seneca, Erie Co., *Clinton;* near Bay View, Erie Co., *Clinton.*

147. NESÆA, Commerson, Juss.

333. **N. verticillata**, HBK.
Rather rare. Squaw Is., Niagara R.; Strawberry Is., Niagara R., *Clinton;* Hanover, Chat. Co.

Order 39. Cucurbitaceæ.

148. SICYOS, L.

334. **S. angulatus**, L.
Rare. West Seneca, Erie Co.

149. ECHINOCYSTIS, Torr. and Gray.

335. **E. lobata**, Torr. and Gray.
Rare. Sulphur Springs, W. Seneca, Erie Co.

Order 40. Umbelliferæ.

150. HYDROCOTYLE, Tourn.

336. **H. Americana**, L.

151. SANICULA, Tourn.

337. **S. Canadensis,** L.
338. **S. Marilandica,** L.

152. DAUCUS, Tourn.

339. D. CAROTA, L.

153. TORILIS, Adans.

340. T. ANTHRISCUS, Gærtn.
Rare. Not seen except near Limestone Hill, W. Seneca, Erie Co. There abundant and spreading.

154. HERACLEUM, L.

341. **H. lanatum,** Michx.

155. PASTINACA, Tourn.

342. P. SATIVA, L.

156. ARCHANGELICA, Hoff.

343. **A. hirsuta,** Torr. and Gray.
Rare. Portage, Liv. Co., *Clinton;* Salamanca, Catt. Co., *Clinton.*

344. **A. atropurpurea,** Hoff.

157. ÆTHUSA, L.

345. A. CYNAPIUM, L., Aurora, Erie Co., *Clinton.*

158. SELINUM, (*Conioselinum Canadensis,* Fischer.)

346. **S. Canadense,** Michx.
Rather rare. Springbook, Erie Co.; Bergen, Gen. Co.; Portage, Wyom. Co.; Jamestown, Chat. Co., *Clinton;* Caledonia, Liv. Co., *Clinton.*

159. THASPIUM, Nutt.

347. **T. barbinode,** Nutt.
348. **T. aureum,** Nutt.

160. PIMPINELLA, L.

349. **P. integerrima,** Benth. and Hook. (*Zizia integerrima,* DC.)

161. CICUTA, L.

350. **C. maculata,** L.
351. **C. bulbifera,** L.

162. SIUM, L.

352. **S. cicutæfolium,** Gmelin. (*S. lineare,* Michx.)

163. BERULA, Koch.

353. **B. angustifolia,** Koch. ? (*Sium angustifolium,* L.)
Rare. Near Smoke's Creek, W. Seneca, Erie Co.

164. CRYPTOTÆNIA, DC.

354. **C. Canadensis,** DC.

165. CHÆROPHYLLUM, L.

355. C. SATIVUM, Lom.
Garden scape., Buffalo, *Clinton.*

166. CARUM.

356. C. CARUI, L.

167. OSMORRHIZA, Raf.

357. **O. longistylis,** DC.

358. **O. brevistylis,** DC.

168. CONIUM, L.

359. C. MACULATUM, L.

169. CORIANDRUM.

360. C. SATIVUM.
Garden scape, Buffalo.

170. ERIGENIA, Nutt.

361. **E. bulbosa,** Nutt.
Rare. Buffalo R., Buffalo; Smoke's Cr., W. Seneca, Erie Co.

ORDER 41. ARALIACEÆ.

171. ARALIA, Tourn.

A. spinosa, L.
Stated by *E. S. Burgess* to be spontaneous at Silver Creek and Panama, Chat. Co.

362. **A. racemosa,** L.

363. **A. hispida,** Ventenat.
Rather rare. W. Seneca, Erie Co.; Hanover, Chat. Co.; Machias, Catt. Co.

364. **A. nudicaulis,** L.

365. **A. quinquefolia,** Decsne and Planch.

366. **A. trifolia,** Decsne and Planch.

Order 42. Cornaceæ.

172. CORNUS, Tourn.

367. **C. Canadensis,** L.
Rare. Pine Hill, Cheektowaga; West Seneca, Erie Co.; Bergen, Gen. Co.; Machias, Catt. Co.

368. **C. florlda,** L.

369. **C. circinata,** L'Her.
Rather rare. Niagara Falls.

370. **C. sericea,** L.

371. **C. stolonifera,** Michx.

372. **C. paniculata,** L'Her.

373. **C. alternifolia,** L.
Rather rare. Hamburgh, Erie Co.

173. NYSSA, L.

374. **N. multiflora,** Wang.
Rather rare. Woods east of Delaware street, near the Park, Buffalo; southeastern portion of Buffalo.

Division II. MONOPETALÆ.

Order 43. Caprifoliaceæ.

174. LINNÆA, Gronov.

375. **L. borealis,** Gronov.
Rare. Hamburgh, Erie Co.; Java, Wyom. Co., *Clinton;* Bergen, Gen. Co.; Caledonia, Liv. Co.

175. SYMPHORICARPUS, Dill.

376. **S. racemosus.,** Michx.
Rare, except in gardens. Near Forestville, Chat. Co.; perhaps the outcast of a garden.

Var. **pauciflorus,** Robbins.
Niagara Falls. Planted in a garden, the variety has grown larger and not distinguishable from the type. It may therefore be regarded rather as a condition than a variety.

377. **S. vulgaris,** Michx.
Rare. Near Ft. Erie, Ont. Probably escaped from cultivation.

176. LONICERA, L.

378. **L. sempervirens,** Ait.
Rare. W. Seneca, Erie Co. A garden scape.

L. grata, Ait. ?
Credited to Silver Creek, Chat. Co., by *E. S. Burgess.*

379. **L. parviflora,** Lam.

380. var. **Douglassii,** Gray.
Rare. Niagara Falls.

381. **L. hirsuta,** Eaton.
Rare. Silver Lake, Wyom. Co., *Clinton;* Markham's (B. & S. W. R. R.), Catt. Co., *Clinton;* near Westfield, Chat. Co., *Clinton;* Jamestown, Chat. Co.

382. L. Tatarica.
Rare. Naturalized in Forest Lawn Cemetery, Buffalo. Also, near Ft. Erie, Ont., and in the woods, near the whirlpool, on the American side of Niagara R.

383. **L. ciliata,** Muhl.
L. cærulea, L. ?
Attributed to Panama, Chat. Co., by *E. S. Burgess.*

384. **L. oblongifolia,** Muhl.
Rare. Near Akron, Erie Co.; Bergen, Gen. Co.; Caledonia, Liv. Co., *Clinton.*

177. DIERVILLA, Tourn.

385. **D. trifida,** Mœnch.

178. TRIOSTEUM, L.

386. **T. perfoliatum,** L.

179. SAMBUCUS, Tourn.

387. **S. Canadensis,** L.
388. **S. pubens,** Michx.

180. VIBURNUM, L.

389. **V. Lentago,** L.
390. **V. nudum,** L.
Rather rare. W. Seneca, Erie Co.; Hanover, Chat. Co.; Port Colborne, Ont.
391. **V. dentatum,** L.
Rather rare. Grand Is., Erie Co.; W. Seneca, Erie Co.
392. **V. pubescens,** Pursh.
393. **V. acerifólium,** L.
394. **V. Opulus,** L.
Rather rare. W. Seneca, Erie Co.; Bergen, Gen. Co.
395. **V. lantanoides,** Michx.

Order 44. Rubiaceæ.

181. GALIUM, L.

396. **G. Aparine,** L.
397. G. Mollugo, L.
A rare weed in gardens, Buffalo.
398. **G. asprellum,** Michx.
399. **G. trifidum,** L., var. **tinctorium,** Torr. and Gray.
400. **G. triflorum,** Michx.
401. **G. pilosum,** Gray.
402. **G. circæzans,** Michx.
403. **G. lanceolatum,** Torr.
404. **G. boreale,** L.

182. CEPHALANTHUS, L.

405. **C. occidentalis,** L.

183. MITCHELLA, L.

406. **M. repens,** L.

184. HOUSTONIA, L.

407. **H. purpurea,** L., var. **ciliolata,** Gray.
Rare, except along Niagara R., at and below the Falls.

408. **H. cærulea,** L.
Rare. Lewiston, Niagara Co.; Salamanca, Catt. Co.

Order 45. Valerianaceæ.

185. VALERIANA, Tourn.

409. **V. sylvatica,** Richards.
Rare. Bergen Swamp, Gen. Co.

410. V. officinalis.
Becoming naturalized in places. Buffalo; Hamburgh, Erie Co.

186. FEDIA, Gærtn.

411. F. olitoria, Vahl.
Rare. Naturalized in northeastern portion of Buffalo, and near Pt. Colborne, Ont.

412. **F. Fagopyrum,** Torr. and Gray.
Rare. Near Sulphur Springs, Cheektowaga, Erie Co.

Order 46. Dipsaceæ.

187. DIPSACUS, Tourn.

413. D. sylvestris, Mill.

Order 47. Compositæ.

188. VERNONIA, Schreb.

414. **V. Noveboracensis,** Willd.
Rare. Portage, Liv. Co., *Clinton.*

189. LIATRIS, Schreb.

415. **L. cylindracea,** Michx.
Rare. Whirlpool woods, Niagara R., American side.

190. EUPATORIUM, Tourn.

416. **E. purpureum,** L.
417. **E. perfoliatum,** L.
418. **E. ageratoides,** L.

191. PETASITES, Tourn.

419. **P. palmata,** Watson. (*Nardosmia palmata,* Hook.)
Rare. Machias, Catt. Co.; Silver Lake, Wyom. Co., *Clinton.*

192. TUSSILAGO, Tourn.

420. **T. Farfara,** L.
Rather rare. Near Sulphur Spring, Cheektowaga, Erie Co.; Bergen, Gen. Co.; Caledonia, Liv. Co.

193. ASTER, L.

A. corymbosus, Ait.
Attributed to the vicinity of Fredonia by *E. S. Burgess.*

421. **A. patens,** Ait.
422. **A. lævis,** L.
423. var. **cyaneus,** Gray.
424. **A. azureus,** Lindl.
Rare. Whirlpool woods, Niagara R., American side, *Clinton.*
425. **A. undulatus,** L.
Rare. Portage, Wyom. Co., *Clinton.*
426. **A. cordifolius,** L.
427. **A. sagittifolius,** Willd.
428. **A. ericoides,** L.
429. var. **villosus.**
430. **A. multiflorus,** Ait.
431. **A. Tradescanti,** L.
432. **A. miser,** L.
433. **A. simplex,** Willd.
434. **A. tenuifolius,** L.
435. **A. longifolius,** Lam.
436. **A. puniceus,** L.
437. var. **vimineus,** Gray.
438. **A. prenanthoides,** Muhl.
Rare. North Collins, Erie Co., *Clinton;* Portage, Wyom. Co., *Clinton.*
439. **A. Novæ-Angliæ,** L.
440. var. **roseus,** Gray.
Rare. Ft. Erie, Ont., *Clinton.*
441. **A. acuminatus,** Michx.
Rare. "Counterfeiter's Ledge," Akron, Erie Co., *Clinton.*
442. **A. ptarmicoides,** Torr. and Gray.
Rare. Whirlpool woods, Niagara R., American side.

194. ERIGERON, L.

443. **E. Canadense,** L.
444. **E. bellidifolium,** Muhl.
445. **E. Philadelphicum,** L.
446. **E. annuum,** Pers.

447. **E. strigosum,** Muhl.

195. DIPLOPAPPUS, Cass.

448. **D. umbellatus,** Torr. and Gray.

196. BELLIS, Tourn.

449. B. PERENNIS, L.
Established in lawns in a few places in Buffalo.

197. SOLIDAGO, L.

450. **S. squarrosa,** Muhl.
Rare. Near Forest Lawn Cemetery, Buffalo.

451. **S. bicolor,** L.
452. var. **concolor,** Gray.
453. **S. latifolia,** L.
454. **S. cæsia,** L.
455. **S. stricta,** Ait.
Rare. Caledonia, Liv. Co., *Clinton.*

456. **S. rigida,** L.
457. **S. Ohioensis, Riddell.**
Rare. Bergen Swamp, Gen. Co., *Clinton.*

458. **S. Houghtonii,** Torr. and Gray.
Rare. Bergen Swamp, Gen. Co., *Clinton.*

459. **S. sempervirens,** L.
Introduced. Spontaneous in gardens, Buffalo, and disposed to spread.

460. **S. neglecta,** Torr. and Gray.
Rare. Bergen Swamp, Gen. Co., *Clinton;* Caledonia, Liv. Co., *Clinton.*

461. **S. patula,** Muhl.
462. **S. arguta,** Ait.
463. var. **juncea,** Gray.
464. S **Muhlenbergii,** Torr. and Gray.
465. **S. altissima,** L.
466. **S. ulmifolia,** Muhl.
467. **S. nemoralis,** Ait.
468. **S. Canadensis,** L.
469. **S. serotina,** Ait.
470. **S. gigantea,** Ait.
471. **S. lanceolata,** L.

198. INULA, L.

472. I. HELENIUM, L.

199. POLYMNIA, L.

473. **P. Canadensis,** L.

Rather rare. Smoke's Cr., W. Seneca, Erie Co.; near Lewiston, Niagara Co.

200. SILPHIUM, L.

474. **S. laciniatum,** L.

Spontaneous in gardens, Buffalo, and disposed to spread. Hardly yet established.

475. **S. trifoliatum,** L.

Attributed to Niagara Falls by Torrey, on the authority of Dr. Eddy, but not seen by us.

201. AMBROSIA, Tourn.

476. **A. trifida,** L.

The var. **integrifolia,** near the bridge of the L. S. & M. S. R. R., over Buffalo R., *Clinton.*

477. **A. artemisiæfolia,** L.

202. XANTHIUM, Tourn.

478. **H. strumarium,** L.

479. H. SPINOSUM, L.

Rare. A "railroad weed," not lately seen, Buffalo.

203. HELIOPSIS, Pers.

480. **H. lævis,** Pers.

481. var. **scabra.** Gray.

204. ECHINACEA, Mœnch.

482. **E. purpurea,** Mœnch. (?)

Very rare. A single plant was seen by Judge Clinton a mile or two east from E. Buffalo station. Possibly *E. angustifolia,* DC.

205. RUDBECKIA, L.

83. **R. laciniata,** L.

484. **R. hirta,** L.

LEPACHYS, Raf.

L. **pinnata,** Torr. and Gray.

Rare. Collected in Chat. Co., on the shore of Lake Erie, by Dr. *H. P. Sartwell.* Not since reported. Probably not within our territory.

206. HELIANTHUS, L.

485. H. ANNUUS, L.

486. **H. giganteus,** L. (?)

Rare. Salamanca, Catt. Co., *Clinton;* Fredonia, Chat. Co., *Petit, ex fide, Burgess.*

487. **H. strumosus,** L.

488. **H. divaricatus,** L.

489. **H. decapetalus,** L.

490. **H. doronicoides,** Lam.

The cultivated variety, formerly known as *H. tuberosus*, has escaped from cultivation in some places in and near Buffalo.

207. COREOPSIS, L.

491. **C. trichosperma,** Michx.

Not seen except in the S. E. portion of Buffalo; there abundant.

492. **C. tinctoria,** Nutt.

Spontaneous in gardens, and escaping, Buffalo.

C. Drummondii.

Spontaneous in gardens, Buffalo.

208. BIDENS, L.

493. **B. frondosa, L.**

494. **B. connata,** Muhl.

495. **B. cernua,** L.

496. **B. chrysanthemoides,** Michx. (?)

Possibly our B. *chrysanthemoides* is only a form of *B. cernua*, L.

497. **B. Beckii,** Torr.

Rare. "Smuggler's Run," Squaw Is., Niagara R., Erie Co., *Clinton.*

498. **B. bipinnata,** L.

Rare. A "railroad weed," Buffalo; not lately seen, *Clinton.*

209. DYSODIA, Cav.

499. **D. chrysanthemoides,** Lag.

Rare. A "railroad weed;" Ft. Erie, Ont., not lately seen.

210. HELENIUM, L.

500. **H. autumnale,** L.

211. GALINSOGA, Ruiz and Pav.

501. G. PARVIFLORA, Cav.

Rare. Court yards and streets, Buffalo. Introduced.

212. MARUTA, Cass.

502. M. COTULA, DC.

213. ANTHEMIS, L.

503. A. ARVENSIS, L.
Rare. A weed in nursery grounds, Pine Hill, Cheektowaga, Erie Co.

214. ACHILLEA, L.

504. A. MILLEFOLIUM, L.
The rose-colored variety in the vicinity of Forest Lawn Cemetery, Buffalo, and at Caledonia, Liv. Co.

215. LEUCANTHEMUM, Tourn.

505. L. VULGARE, Lam.

216. CHRYSANTHEMUM, L.

506. C. PARTHENIUM, Pers. (*Leucanthemum Parthenium*, Godron.)
A weed in some gardens. Buffalo; Pt. Colborne, Ont.

217. BALSAMITA, Willd.

507. B. VULGARIS, Willd.
Rare. Escaped from gardens, Buffalo, and elsewhere.

218. MATRICARIA, Tourn.

508. M. CHAMOMILLA, L.
Rare. A garden weed; Cheektowaga, Erie Co.

219. TANACETUM, L.

509. T. VULGARE, L.

510. var. **crispum**, Gray.

220. ARTEMISIA, L.

511. **A. Canadensis**, Michx.
Rare. Irving, Chat. Co.; Pt. Abino, Ont.

512. A. VULGARIS, L.
Near the lower Suspension Bridge, Niagara R., American side.

513. **A. biennis**, Willd.
Recently introduced from the west, but already very common. With us, apparently, always annual.

514. A. ABROTANUM, L.
Escaped from gardens, Buffalo, and elsewhere.

515. A. ABSINTHIUM, L.
Milford, Chat. Co., *Burgess*. An escape.

221. GNAPHALIUM, L.

516. **G. decurrens**, Ives.
Less common than the next. The Plains, Buffalo.

517. **G. polycephalum**, Michx.

518. **G. uliginosum.**

222. ANTENNARIA, Gærtn.

519. **A. margaritacea,** R. Br.

520. **A. plantiginifolia,** Hook.

223. ERECHTHITES, Raf.

521. **E. hieracifolia,** Raf.

224. CACALIA, L.

522. **C. suaveolens,** L.
Avon, Liv. Co., *B. D. Greene.*

523. **C. atriplicifolia,** L.
Rare. Portage, Liv. Co., *Clinton;* Bemus Point, Chat. Lake.

225. SENECIO, L.

524. S. VULGARIS, L.
A rather rare garden weed, Buffalo.

525. **S. aureus,** L.

526. var. **Balsamitæ,** Gray.
Niagara R., below the Falls.

226. CENTAUREA, L.

527. C. CYANUS, L.
Spontaneous in gardens, and escaped, Buffalo and elsewhere.

227. CIRSIUM, Tourn.

528. C. LANCEOLATUM, Scop.

529. **C. discolor,** Spreng.

530. **C. altissimum,** Spreng.

531. **C. muticum,** Michx.
Rare. Bergen Swamp, Gen. Co., *Clinton;* Caledonia, Liv. Co., *Clinton.*

532. **C. pumilum,** Spreng.
Rather rare. The Plains, Buffalo.

533. C. ARVENSE, Scop.

228. ONOPORDON, Vaill.

534. O. ACANTHIUM, L.
Occasionally escaped. Abbott Road, W. Seneca, Erie Co.; Bergen, Gen. Co.; Jamestown, Chat. Co., *Clinton.*

229. SILYBUM, Vaill.

535. S. MARIANUM, Gærtn.
Occasionally escaped, Buffalo.

230. ARCTIUM, L.

536. A. LAPPA, L., var. **major.** (*Lappa officinalis, Allioni.*)
537. var. **tomentosa,** Gray.
Rare. Forest Lawn Cemetery, Buffalo, *Clinton.*

231. LAMPSANA, Tourn.

538. L. COMMUNIS, L.
Rare. In gardens and court-yards, Buffalo.

232. CICHORIUM, Tourn.

539. C. INTYBUS, L.
Not common. Roadsides, near Scajaquady's Cr., Buffalo; Pine Hill, Cheektowaga, Erie Co.; near Angola, Erie Co.

KRIGIA, Schreb.

K. amplexicaulis, Nutt. (*Cynthia Virginica,* Don.)
Rare. Panama, Chat. Co., *Burgess.* Perhaps entering our territory at the southwest.

233. LEONTODON, L., Juss.

540. L. AUTUMNALE, L.
Rare. Buffalo. Probably introduced with "English Lawn Grass."

234. HIERACIUM, Tourn.

541. **H. Canadense,** Michx.
542. **H. scabrum,** Michx.
543. **H. Gronovii,** L.
544. **H. venosum,** L.
545. **H. paniculatum,** L.

235. PRENANTHES, L.

546. **P. alba.** L. (*Nabalus albus,* Hook.)
547. var. **Serpentaria.**
548. **P. altissima, L.** (*Nabalus altissimus,* Hook.)
549. **P. crepidina,** Michx. ? (*Nabalus crepidineus,* DC.)
Very rare. Wheelbarrow Pt., Buffalo. Only two plants seen, and those not lately. Some doubt exists as to the species, but it surely better corresponds with *P. crepidina* than with any other described in Gray's Manual.

236. TARAXACUM, Haller.

550. T. DENS-LEONIS, Desf.

237. LACTUCA, Tourn.

551. **L. Canadensis,** L.

552. L. SATIVA, L.
Often spontaneous.

553. **L. leucophæa,** Benth. (*Mulgedium leucophæum,* DC.)

238. SONCHUS., L.

554. S. OLERACEUS, L.

555. S. ASPER, Vill.

556. S. ARVENSIS, L.
Rare. Angola, Erie Co., *Clinton.*

Order 48. Lobeliaceæ.

239. LOBELIA, L.

557. **L. cardinalis,** L.

558. **L. syphilitica,** L.

559. **L. inflata,** L.

L. spicata, Lam.
Attributed to Clymer, Chat. Co., by *E. S. Burgess.*

560. **L. Kalmii,** L.
Rather rare. Lake shore, near the foot of York street, Buffalo; Wind-mill Pt. and Pt. Abino, Ont.; Goat Is., Niagara Falls; Bergen Swamp, Gen. Co.

Order 49. Campanulaceæ.

240. CAMPANULA, Tourn.

561. **C. rotundifolia,** L.
Not common. Niagara R., at and below the Falls; Eighteen-mile Creek, Hamburgh, Erie Co.

562. **C. aparinoides,** Pursh.

563. **C. Americana,** L.
Not common. Smoke's Cr., W. Seneca, Erie Co.

564. C. GLOMERATA, L. ?
Rare. Along the turnpike, Hamburgh, Erie Co. Some doubt, however, remains as to the identity of the species.

565. C. RAPUNCULOIDES, L.

241. SPECULARIA, Heister.

566. **S. perfoliata,** A. DC.
Very abundant at Pt. Abino and Port Colborne, Ont.; elsewhere rather rare.

Order 50. Ericaceæ.

242. GAYLUSSACIA, H. B. K.

567. **G. frondosa,** Torr. and Gray.

568. **G. resinosa,** Torr. and Gray.

243. VACCINIUM, L.

569. **V. Oxycoccus,** L.

Port Colborne, Ont.; Hanover, Chat. Co.; Bergen Swamp, Gen. Co., *Clinton*, and elsewhere.

570. **V. macrocarpon,** Ait.

Hanover, Chat. Co.

571. **V. stamineum,** L.

Rare. The Plains, Buffalo.

572. **V. Pennsylvanicum,** Lam.

573. **V. Canadense,** Kalm.

Rare. Machias, Catt. Co.; "Rock City," near Salamanca, Catt. Co.

574. **V. vacillans,** Solander.

575. **V. corymbosum,** L.

244. CHIOGENES, Salisb.

576. **C. hispidula,** Torr. and Gray.

Rare. Hanover, Chat Co.; Bergen, Gen. Co.

245. ARCTOSTAPHYLOS, Adans.

577. **A. Uva-ursi,** Spreng.

Rare. Pt. Abino, Ont.; Niagara R., at and below the Falls.

246. EPIGÆA, L.

578. **E. repens,** L.

Rare. Gowanda, Erie Co.; "Rock City," near Salamanca, Catt. Co.; Portage, Liv. and Gen. Cos.; Jamestown, Chat. Co.

247. GAULTHERIA, Kalm.

579. **G. procumbens,** L.

248. CASSANDRA, Don.

580. **G. calyculata,** Don.

Sardinia, Erie Co.; Hanover, Chat. Co.; Machias, Catt. Co.

249. ANDROMEDA, L.

581. **A. polifolia,** L.

Rare. Black Creek, Ont., *Clinton;* near Akron, Erie Co.; Java Lake, Wyom. Co., *Clinton;* Machias, Catt. Co.; "Randall's Fly," near Milford, Chat. Co., *Burgess.*

250. KALMIA, L.

K. latifolia, L.

Rare. Olean, Catt. Co., *Clinton.* Not unlikely to occur in the southeastern portion of our territory.

582. **K. glauca,** Ait.

Rare. Machias, Catt. Co.

251. AZALEA, L.

583. **A. nudiflora,** L.

Rather rare. Near Batavia and Bergen, Gen. Co.; Machias, Catt. Co.; "Rock City," near Salamanca, Catt. Co.; Silver Lake, Wyom. Co.; Jamestown, Chat. Co.

252. RHODODENDRON, L.

584. **R. maximum,** L.

Rare. Hamburgh, Erie Co.; Machias, Catt. Co.; Clear Creek, Chat. Co.

253. LEDUM, L.

585. **L. latifolium,** Ait.

Rare. Black Creek, Ont., *Clinton;* Bergen, Gen. Co.; Machias, Catt. Co.

254. PYROLA, Tourn.

586. **P. rotundifolia,** L.

Rather rare. Woods east of Delaware street, and north of the Park, Buffalo; and elsewhere.

var. **uliginosa,** Gray.

Rare. Near Akron, Erie Co.

587. **P. elliptica,** Nutt.

588. **P. chlorantha,** Swartz.

589. **P. secunda,** L.

255. MONESES, Salisb.

590. **M. uniflora,** Gray.

Rare. Pine Hill, Cheektowaga, Erie Co., *Clinton;* but rather abundant at Pt. Abino, Ont.

256. CHIMAPHILA, Pursh.

591. **C. umbellata,** Nutt.

592. **C. maculata,** Pursh.

Rare. Hanover, Chat. Co., and elsewhere.

257. PTEROSPORA, Nutt.

593. **P. Andromedea,** Nutt.

Rare. Whirlpool, American side, *Clinton;* Portage, Gen. Co.

258. MONOTROPA, L.

594. **M. uniflora,** L.

595. **M. Hypopitys,** L.

Rare. The Plains, Buffalo, *Clinton;* Pt. Abino, Ont.; Goat Is., Niagara Falls, *Clinton;* Eighteen-mile Cr., Evans, Erie Co.; Bemus Pt., Chat. Co.

ORDER 51 AQUIFOLIACEÆ.

259. ILEX, L.

596. **I. monticola,** Gray.

Rare. "Rock City," near Salamanca, Catt. Co.; Panama Rocks, Chat. Co., *Burgess.*

597. **I. verticillata,** Gray.

260. NEMOPANTHES, Raf.

598. **N. Canadensis,** DC.

ORDER 52. PLANTAGINIACEÆ.

261. PLANTAGO, L.

599. P. MAJOR, L.

600. **P. Kamschatica,** Cham.

Undoubtedly indigenous. Perhaps not very rare. Certainly abundant along Rush Cr., Hamburgh, Erie Co., and readily distinguished from *P. major,* by the pink color at the base of the leaves.

601. P. LANCEOLATA, L.

ORDER 53. PRIMULACEÆ.

262. PRIMULA, L.

602. **P. Mistassinica,** Michx.

Very rare. Only found at Portage, Wyom. Co.

263. TRIENTALIS, L.

603. **T. Americana,** Pursh.

264. LYSIMACHIA, Tourn.

604. **L. thyrsiflora,** L.

605. **L. stricta,** Ait.

606. **L. quadrifolia,** L.

Rather rare. Machias, Catt. Co.; Salamanca, Catt. Co.; Silver Lake, Wyom. Co.; Portage, Wyom. Co.

607. **L. ciliata,** L.
608. **L. lanceolata,** L.
609. **L. longifolia,** Pursh.
610. L. NUMMULARIA, L.

Rare. A garden escape.

265. ANAGALLIS, Tourn.

611. A. ARVENSIS, L.

A rare weed in gardens, Buffalo.

266. SAMOLUS, L.

612. **S. Valerandi,** L., var. **Americanus,** Gray.

ORDER 54. LENTIBULACEÆ.

267. UTRICULARIA, L.

613. **U. vulgaris,** L.
614. **U. intermedia,** Hayne.

Rare. Squaw Is., Niagara R.

615. **U. cornuta,** Michx.

Rather rare. Niagara Falls, Canadian side, *Clinton;* Cassadaga Lake, Chat. Co.

268. PINGUICULA, L.

616. **P. vulgaris.**

Very rare. Portage, Wyom. Co.

ORDER 55. BIGNONIACEÆ.

269. MARTYNIA, L.

617. **M. proboscidea,** Glox.

Rare. Occasionally escaped from gardens, where it is often spontaneous. Buffalo; Lewiston, Niagara Co.

ORDER 56. OROBANCHACEÆ.

270. EPIPHEGUS, Nutt.

618. **E. Virginiana,** Bart.

271. CONOPHOLIS, Wallroth.

619. **C. Americana,** Wallroth.

Rare. The Plains, Buffalo; Tonawanda, Erie Co., *Clinton;* Hamburgh, Erie Co.; Pt. Abino, Ont.

272. APHYLLON, Mitchell.

620. **A. uniflorum,** Torr. and Gray.

Order 57. Scrophulariaceæ.

273. VERBASCUM, L.

621. V. Thapsus, L.

622. V. Blattaria, L.

274. LINARIA, Tourn.

623. L. vulgaris, Mill.

275. ANTIRRHINUM, L.

624. A. Orontium, L.

A rare garden weed, Buffalo.

276. SCROPHULARIA, Tourn.

625. **S. nodosa,** L.

277. COLLINSIA, Nutt.

626. **C. verna,** Nutt.

Rare. Smoke's Cr., W. Seneca, Erie Co.; "Forks of the Broken Straw," Chat. Co., *Burgess.*

278. CHELONE, Tourn.

627. **C. glabra,** L.

279. PENTSTEMON, Mitchell.

628. **P. pubescens,** Solander.

Not very common. The Plains, Buffalo; Grand Is., Erie Co.; Port Colborne, Ont.; Niagara Falls.

280. MIMULUS, L.

629. **M. ringens,** L.

630. **M. alatus,** Ait.

Much less common than *M. ringens.* Scajauquady's Cr., Buffalo, and elsewhere.

281. GRATIOLA, L.

631. **G. Virginiana,** L.

282. ILYSANTHES, Raf.

632. **I. gratioloides,** Benth.

Not very common. Lake shore, Buffalo, and elsewhere.

283. VERONICA, L.

633. **V. Virginica,** L.

Rare. Portage, Liv. Co., *Clinton;* Bemus Pt., Chat. Co.; Avon, Liv. Co., *Sartwell.*

634. **V. Anagallis,** L.

Rare. Alabama, Gen. Co., *Clinton;* Bergen, Gen. Co.

635. **V. Americana,** Schweinitz.

636. **V. scutellata,** L.
637. **V. officinalis,** L.
638. **V. serpyllifolia,** L.
639. **V. peregrina,** L.
640. V. ARVENSIS, L.
641. V. CHAMÆDRYS, L.

Very rare. Found growing in a roadside, Buffalo, and perpetuated.

284. GERARDIA, L.

642. **G. purpurea,** L.

Rare. Strawberry Is., Niagara R.; Wind-mill Pt., Ont.; Niagara Falls.

643. **G. tenuifolia,** Vahl.

Not very common. The Plains, Buffalo; W. Seneca, Erie Co.

644. **G. flava,** L.
645. **G. quercifolia,** Pursh.
646. **G. integrifolia,** Gray.

Rare. Salamanca, Catt. Co., *Clinton.*

285. CASTILLEIA, Mutis.

647. **C. coccinea,** Spreng.

Rather rare. Northeastern part of Buffalo; near the Whirlpool, Niagara R., Canadian side, and elsewhere.

286. PEDICULARIS, Tourn.

648. **P. Canadensis,** L.
649. **P. lanceolata,** Michx.

Rare. Low grounds in Forest Lawn Cemetery, Buffalo; Islands of Niagara R.

287. MELAMPYRUM, Tourn.

650. **M. Americanum,** Michx.

ORDER 58. ACANTHACEÆ.

288. DIANTHERA, Gronov.

651. **D. Americana,** L.

Not very common. Buffalo R.; Niagara R., especially on the American side, a short distance from Goat Is.

ORDER 59. VERBENACEÆ.

289. VERBENA, L.

652. **V. hastata,** L.

653. **V. urticifolia,** L.
V. Aubletia, L.
Spontaneous in gardens, Buffalo.

290. PHRYMA, L.

654. **P. Leptostachya,** L.

Order 60. Menthaceæ.

291. TEUCRIUM, L.

655. **T. Canadense,** L.
A white flowering variety at Pt. Abino. Ont.

292. MENTHA, L.

656. M. VIRIDIS, L.
657. M. PIPERITA, L.
Cheektowaga, Erie Co. and elsewhere. Not common.

658. **M. Canadensis,** L.
659. var. **glabrata.** Benth.

293. LYCOPUS, L.

660. **L. Virginicus,** L.
661. **L. Europæus,** L.

294. HYSSOPUS, L.

662. H. OFFICINALIS, L.
Occasionally escaped near Buffalo.

295. PYCNANTHEMUM, Michx.

663. **P. incanum,** Michx.
Rare. Portage, Wyom. Co., *Clinton.*

664. **P. lanceolatum,** Pursh.
A variety with proliferous heads, on Squaw Is., Niagara R.

665. **P. linifolium,** Pursh.

296. THYMUS, L.

666. T. SERPYLLUM, L.
Thoroughly established in a cemetery at Williamsville, Erie Co.

297. CALAMINTHA, Mœnch.

667. **C. glabella,** Benth., var. **Nuttallii,** Gray.
Ft. Erie, and thence along the lake shore to Pt. Abino, Ont.; Niagara Falls.

668. **C. Clinopodium,** Benth.

298. MELISSA, L.

669. M. OFFICINALIS, L.
Escaped in many places.

299. HEDEOMA, Pers.

670. **H. pulegioides,** Pers.

300. COLLINSONIA, L.

671. **C. Canadensis,** L.

301. SALVIA, L.

672. S. OFFICINALIS, L.
Established in the edge of a wood near DeVeaux College, Niag. Co., opposite the Whirlpool, far from cultivation, and spreading.

302. MONARDA, L.

673. **M. didyma,** L.
Rare. Forest Lawn Cemetery, Buffalo; Machias, Catt. Co., and elsewhere.

674. **M. fistulosa,** L.

303. BLEPHILIA, Raf.

675. **B. hirsuta,** Benth.
Rare. Clear Cr., Chat. Co.

304. LOPHANTHUS, Benth.

676. **L. nepetoides,** Benth.
Rare. Pt. Abino, Ont.; Aurora, Erie Co., *Clinton.*

677. **L. scrophulariæfolius,** Benth.

305. NEPETA, L.

678. N. CATARIA, L.
679. N. GLECHOMA, L.

306. DRACOCEPHALUM, L.

680. **D. parviflorum,** Nutt.
Rare. Sparingly found at Ft. Erie, Ont.

307. PHYSOSTEGIA, Benth.

681. **P. Virginiana,** Benth.
Rather rare, Islands in Niagara R.; Pt. Abino, Ont.

308. BRUNELLA, Tourn.

682. **B. vulgaris,** L.

309. SCUTELLARIA, L.

683. **S. parvula,** Michx.
Rather rare. Lake shore, near foot of York street, Buffalo; Pt. Abino, Ont.; Goat Is., Niagara Falls.

684. **S. galericulata,** L.

685. **S. lateriflora,** L.

310. MARRUBIUM, L.

686. M. VULGARE, L.
Rather rare. The Plains, Buffalo, and elsewhere.

311. GALEOPSIS, L.

687. G. TETRAHIT, L.

312. STACHYS, L.

688. **S. palustris,** L.

689. var. **aspera,** Gray.

313. LEONURUS, L.

690. L. CARDIACA, L.

314. LAMIUM, L.

691. L. AMPLEXICAULE, L.

692. L. PURPUREUM, L.
A rare garden weed, Buffalo.

315. BALLOTA, L.

693. **B. nigra,** L.
A rare garden weed, Buffalo, not lately seen.

ORDER 61. BORRAGINACEÆ.

316. ECHIUM, Tourn.

694. E. VULGARE, L.
Rare. Niagara Falls.

317. SYMPHYTUM, Tourn.

695. S. OFFICINALE, L.
Rare. Roadsides in the suburbs of Buffalo; Attica, Wyom. Co.; Portage, Liv. Co., *Clinton.*

318. ONOSMODIUM, Michx.

696. **O. Carolinianum,** DC.

319. LITHOSPERMUM, Tourn.

697. L. ARVENSE, L.

698. **L. officinale,** L.
Rare, except at Niagara Falls.

699. **L. latifolium,** Michx.

700. **L. hirtum,** Lehm.
Rare. Sand-drifts of the lake shore, Ft. Erie and Pt. Abino, Ont; near Batavia, Gen. Co.

320. MERTENSIA, Roth.

701. **M. Virginica,** DC.

321. MYOSOTIS, L.

702. **M. palustris,** Withering, var. **laxa,** Gray.

703. **M. arvensis,** Hoffman.
Rare. A weed in a few gardens, Buffalo; Pine Hill, Cheektowaga, Erie Co.

704. **M. verna,** Nutt.
Rare. The Plains, Buffalo.

322. ECHINOSPERMUM, Swartz.

705. E. LAPPULA, Lehm.

323. CYNOGLOSSUM, Tourn.

706. **C. officinale,** L.

707. **C. Virginicum,** L.
Rare. Whirlpool woods, Niagara R., American side; Akron, Erie Co.; "Rock City," Salamanca, Catt. Co.

708. **C. Morisoni,** DC.

324. HELIOPHYTUM, Cham., DC.

709. **H. Indicum,** DC.
A rare garden weed, probably precarious. Buffalo.

ORDER 62. HYDROPHYLLACEÆ.

325. HYDROPHYLLUM, L.

710. **H. Virginicum,** L.

711. **H. Canadense,** L.
Less common than *H. Virginicum.* Buffalo R.; Hanover, Chat. Co.

ORDER 63. POLEMONIACEÆ.

326. POLEMONIUM, L.

712. **P. reptans,** L.
Southeastern part of Buffalo; but growing scarce.

327. PHLOX, L.

713. **P. paniculata,** L.

Spontaneous in gardens; escaped, *Clinton.*

714. **P. maculata,** L.

One plant seen growing "wild," in woods near Delevan avenue, Buffalo, now included in Forest Lawn Cemetery.

715. **P. divaricata,** L.

716. var. **Laphamii,** Wood.

717. **P. subulata,** L.

Found many years ago on low sand-dunes near the foot of Genesee street, Buffalo; banks of Allen's Cr., Le Roy, Gen. Co., *Clinton;* banks of Wolf Cr., near Portage, Wyom. Co., *Clinton.*

Order 64. Convolvulaceæ.

328. IPOMÆA, L.

718. **I. purpurea,** Lam.

Spontaneous in gardens. Rarely escaped.

719. **I. pandurata,** Meyer.

Rare. In a field on the Plains, near the Erie County Almshouse, Buffalo.

329. CONVOLVULUS, L.

720. **C. arvensis,** L.

Rather rare. Waste places and roadsides, Buffalo; Lewiston, Niagara Co.

721. **C. Sepium,** L. (*Calystegia Sepium*, R. Br.)

722. **C. spithamæus,** L. (*Calystegia spithamæa*, Pursh.)

Very rare. One specimen only found. Whirlpool woods, Niagara R., Ont., *Clinton.*

330. CUSCUTA, Tourn.

723. C. Epilinum, Weihe.

Rare. In flax fields, Niagara Co.

724. **C. inflexa,** Engelm.

Rare. Youngstown, Niagara Co.

725. **C. Gronovii,** Willd.

Order 65. Solanaceæ.

331. SOLANUM, Tourn.

726. S. Dulcamara, L.

727. S. NIGRUM, L.

728. S. CAROLINENSE, L.

Rare. Along the Buffalo & Lake Huron Railway track at Ft. Erie, Ont.; along the track of the Lake Shore & Michigan Southern Railroad, in Buffalo.

332. PHYSALIS, L.

729. **P. pubescens,** L.

Rather rare. Near the lake shore, W. Seneca, Erie Co.

730. **P. viscosa,** L.

731. **P. Philadelphica,** L. ?

333. NICANDRA, Adans.

732. N. PHYSALOIDES, Gærtn.

Occasional. Buffalo; Ft. Erie, Ont.

334. ATROPA, L.

733. A. BELLADONNA, L.

A rare garden weed, Buffalo.

335. LYCIUM, L.

734. L. VULGARE, Dunal.

A garden scape. Niagara Falls.

336. HYOSCYAMUS, Tourn.

735. H. NIGRUM, L.

Rather rare. Waste places near the Erie County Penitentiary, Buffalo; Ft. Erie, Ont.

337. DATURA, L.

736. D. STRAMONIUM, L.

Rather rare. Youngstown, Niagara Co.

737. D. TATULA, L.

Waste places, Buffalo, and elsewhere. Here more common than *D. Stramonium*.

338. NICOTIANA, L.

738. N. RUSTICA, L.

Rare. Ft. Erie, Ont., and elsewhere.

ORDER 66. GENTIANIACEÆ.

339. FRASERA, Walt.

739. **F. Caroliniensis,** Walt.

Rare. The Plains, Buffalo; Tonawanda, Erie Co. A perennial! But often dying as soon as the seed is matured.

340. GENTIANA, L.

740. **G. quinqueflora,** Lam.
Rather rare. The Plains, Buffalo.

741. **G. crinita,** Frœl.
Rare. Islands of Niagara R.; Hamburgh, Erie Co.; Caledonia, Liv. Co.

742. **G. detonsa,** Fries.
Rare. Niagara Falls.

743. **G. Andrewsii,** Griseb.

744. var. **albiflora,** Squaw Is. and Strawberry Is., Niagara R.; Salamanca, Catt. Co., *Clinton*.

745. **G. puberula,** Michx.
Very rare. Four or five plants only noticed in the edge of a wood on the Plains, Buffalo.

341. MENYANTHES, Tourn.

746. **M. trifoliata,** L.
Rather rare. Pt. Abino, Ont.; Bergen Swamp, Gen. Co.; Hanover, Chat. Co.; Machias, Catt. Co.

Order 67. Apocynaceæ.

342. APOCYNUM, Tourn.

747. **A. androsæmifolium,** L.

748. **A. cannabinum,** L.

343. VINCA, L.

749. V. MINOR, L.
Escaped into roadsides in a few places, Forest Lawn Cemetery, Buffalo, and elsewhere.

Order 68. Asclepiadaceæ.

344. ASCLEPIAS, L.

750. **A. Cornuti,** Decaisne.

751. **A. phytolaccoides,** Pursh.

752. **A. quadrifolia,** Jacq.
Rare. Whirlpool woods, Niagara R., American side.

753. **A. incarnata,** L.
A variety with white flowers, noticed in southeastern portion of Buffalo.

754. **A. tuberosa,** L.
Abundant upon the Plains, Buffalo; near the Whirlpool, on either side of Niagara R., and in a few other places.

755. **A. verticillata,** L.

Rare. Whirlpool woods, Niagara R., American side.

345. VINCETOXICUM, Mœnch.

756. V. NIGRUM. Mœnch.

Rare. A garden weed. Buffalo. Not lately seen.

ORDER 69. OLEACEÆ.

346. LIGUSTRUM, Tourn.

757. L. VULGARE, L.

Rarely escaped, Buffalo.

347. FRAXINUS, Tourn.

758. **F. Americana,** L.

759. **F. pubescens,** Lam.

760. **F. viridis,** Michx. f.

761. **F. sambucifolia,** Lam.

Division III. APETALÆ.

Order 70. Aristolochiaceæ.

348. ASARUM, Tourn.

762. **A. Canadense,** L.

Order 71. Phytolaccaceæ.

349. PHYTOLACCA, Tourn.

763. **P. decandra,** L.

Order 72. Chenopodiaceæ.

350. CHENOPODIUM, L.

764. C. album, L.

765. C. glaucum, L.

Rather rare. Roadsides in Buffalo.

766. C. urbicum, L.

Rather rare. With *C. glaucum*.

767. C. hybridum, L.

768. C. Botrys, L.

Rather rare. Shore of Niagara R., Buffalo; Ft. Erie, Ont.

769. C. ambrosioides, L., var. anthelminticum, Gray.

Rare. Ft. Erie, Ont.

351. BLITUM, Tourn.

770. **B. capitatum,** L.

Rather rare. Gowanda, Erie Co.; Hanover, Chat. Co.; Machias, Catt. Co.

352. ATRIPLEX, Tourn.

771. **A. patula,** L., var. **hastata,** Gray.

772. var. **littoralis,** Gray.

353. CORISPERMUM, Ant. Juss.

773. **C. hyssopifolium,** L.

Rare. Shore of Niagara R., Buffalo; Lake shore, above Ft. Erie, Ont.

Order 73. Amarantaceæ.

354. AMARANTUS, Tourn.

774. A. hypochondriacus, L.
775. A. retroflexus, L.
776. var. hybridus, Gray.
777. A. albus, L.
778. A. spinosus, L.

Rare. Along railroad tracks in the southeastern portion of Buffalo. Not lately seen.

Order 74. Polygonaceæ.

355. POLYGONUM, L.

779. P. orientale, L.

Spontaneous in gardens and escaped, Buffalo.

780. **P. Pennsylvanicum,** L.
781. **P. incarnatum,** Ell.

Rather rare. Southeastern portion of Buffalo, *Clinton;* Sulphur Spring, Cheektowaga, Erie Co., *Clinton.*

782. L. Persicaria, L.
783. **L. Hydropiper,** L.
784. **P. acre,** HBK.
785. **P. hydropiperoides,** Michx.
786. **P. amphibium,** L.. var. **aquaticum,** Willd.

Rare. Strawberry Is., Niagara R., *Clinton.*

787. var. **terrestre,** Willd.

Rare. Southeastern portion of Buffalo, *Clinton;* Pt. Abino, Ont., *Clinton;* Strawberry Is., Niagara R., *Clinton.*

788. **P. Hartwrightii,** Gray.

Rare. Niagara R , near the upper or new ferry to Grand Is., *Clinton;* Pt. Abino, Ont., *Clinton..*

789. **P. Virginianum,** L.
790. **P. aviculare,** L.
791. **P. erectum,** L.
792. **P. arifolium,** L.
793. **P. sagittatum,** L.
794. P. Convolvulus, L.
795. **P. dumetorum,** L.

356. FAGOPYRUM, Tourn.

796. F. esculentum, Mœnch.

357. RUMEX, L.

797. **R. orbiculatus,** Gray.
Rare. Buffalo; *Clinton.*

798. **R. Brittanica,** L.
Rather rare. Southeastern portion of Buffalo, *Clinton ;* Smoke's Cr., W. Seneca, Erie Co., *Clinton ;* Bay View, Hamburgh, Erie Co., *Clinton.*

799. **R. verticillatus,** L.

800. R. CRISPUS, L.

801. R. OBTUSIFOLIUS, L.

802. R. ACETOSELLA, L.

ORDER 75. LAURACEÆ.

358. SASSAFRAS, Nees.

803. **S. officinale,** Nees.

359. LINDERNA, Thunberg.

804. **L. Benzoin,** Meisner.

ORDER 76. THYMELACEÆ.

360. DIRCA, L.

805. **D. palustris,** L.

ORDER 77. ELÆAGNACEÆ.

361. SHEPHERDIA, Nutt.

806. **S. Canadensis,** Nutt.

ORDER 78. SANTALACEÆ.

362. COMANDRA, Nutt.

807. **C. umbellata,** Nutt.

808. **C. livida,** Richardson. ?
It seems altogether likely that this is the species noticed in Bergen Swamp, by *J. A. Paine.*

ORDER 79. SAURURACEÆ.

363. SAURURUS, L.

809. **S. cernuus,** L.

Order 80. Ceratophyllaceæ.

364. CERATOPHYLLUM, L.

810. **C. demersum,** L., var. **echinatum,** Gray.

Order 81. Callitrichaceæ.

365. CALLITRICHE, L.

811. **C. verna,** L.

Order 82. Euphorbiaceæ.

366. EUPHORBIA, L.

812. **E. polygonifolia,** L.

813. **E. maculata,** L.

814. **E. hypericifolia,** L.

Rather rare. Track, of the L. S. & M. S. R. R., Buffalo; Silver Creek, Chat. Co.

815. **E. corollata,** L.

Rare. Portage, Wyom. Co., *Clinton.*

816. E. platyphylla, L.

817. E. Helioscopia, L.

818. E. Esula, L.

Rare. Shore of Niagara R., between Black Rock and Tonawanda, *John F. Cowell;* Attica, Wyom. Co., *Clinton.*

819. E. Cyparissias, L.

Rather rare. Escaped from cultivation in a few places.

820. E. Peplus, L.

Becoming a rather common garden weed, Buffalo.

821. E. Lathyris, L.

Rare. Silver Creek, Chat. Co., *Clinton.*

367. ACALYPHA, L.

822. **A. Virginica,** L.

Order 83. Urticaceæ.

368. ULMUS, L.

823. **U. fulva,** Michx.

824. **U. Americana,** L.

825. **U. racemosa,** Thomas.

Very rare. A few specimens noticed in the northern portion of Buffalo. A large tree in Forest Lawn Cemetery, Buffalo.

369. MORUS.

826. **M. rubra,** L.

A few trees in the woods near the Whirlpool, Niagara R., American side.

827. M. ALBA, L.

Spontaneous in some places, Buffalo.

370. URTICA, Tourn.

828. **U. gracilis,** Ait.

829. U. DIOICA, L.

Rare. Near Ft. Erie, Ont.

371. LAPORTEA, Gaudichaud.

830. **L. Canadensis,** Gaudichaud.

372. PILEA, Lindl.

831. **P. pumila.** Gray.

373. BŒHMERIA, Jacq.

832. **B. cylindrica,** Willd.

374. CANNABIS, Tourn.

833. C. SATIVA, L.

375. HUMULUS, L.

834. **H. Lupulus,** L.

Rare. Borders of Buffalo R., near Sulphur Springs, Cheektowaga, Erie Co., and elsewhere.

ORDER 84. PLATANACEÆ.

376. PLATANUS, L.

835. **P. occidentalis,** L.

ORDER 85. JUGLANDACEÆ.

377. JUGLANS, L.

836. **J. cinerea,** L.

837. **J. nigra,** L.

378. CARYA, Nutt.

838. **C. alba,** Nutt.

839. **C. tomentosa,** Nutt.

Rare. Tonawanda, *Clinton.*

840. **C. porcina,** Nutt.

841. **C. amara,** Nutt.

Order 86. Cupuliferæ.

379. QUERCUS, L.

842. **Q. alba,** L.
843. **Q. obtusiloba,** Michx.
844. **Q. macrocarpa,** Michx.
845. **Q. bicolor,** Willd.
Rare. Grand Is., Niagara R.
846. **Q. Muhlenbergii,** Engelm. (*Q. Prinus,* L., var. *acuminata,* Michx.)
Rare. Near Forest Lawn Cemetery, Buffalo.
847. **Q. prinoides,** Willd. (*Q. Prinus,* L., var. *humilis,* Marsh.)
Rare. The Plains, Buffalo.
848. **Q. coccinea,** Wang.
849. **Q. tinctoria,** Bart.
850. **Q. rubra,** L.
851. **Q. palustris,** Du Roi.

380. CASTANEA, Tourn.

852. **C. vesca,** L., var. **Americana,** Michx.

381. FAGUS, Tourn.

853. **F. ferruginea,** Ait.

382. CORYLUS, Tourn.

854. **C. rostrata,** Ait.
Rare. Forest Lawn Cemetery, Buffalo.

383. OSTRYA, Micheli.

855. **O. Virginica,** Willd.

384. CARPINUS, L.

856. **C. Americana,** Michx.

Order 87. Myricaceæ.

385. MYRICA, L.

857. **M. Gale,** L.
Rare. Hanover, Chat. Co.; Machias, Catt. Co.
858. **M. cerifera,** L.
Rare. One or two specimens in the southeastern portion of Buffalo. Sheldon, Gen. Co., *Robert Hadfield;* Bergen Swamp, Gen. Co.; Caledonia, Liv. Co.

386. COMPTONIA, Solander.

859. **C. asplenifolia,** Ait.
Rare. Near Portage, Liv. Co., *J. F. Cowell;* Jamestown, Chat. Co.; Olean, Catt. Co., *Clinton.*

Order 88. Betulaceæ.

387. BETULA, Tourn.

860. **B. lenta,** L.

861. **B. lutea,** Michx. f.

862. **B. papyracea,** Ait.

Rather rare. Goat Is., Niagara Falls; Youngstown, Niagara Co.

863. **B. pumila,** L.

Very rare. Tonawanda Swamp, Dr. *C. M. Booth.*

388. ALNUS, Tourn.

864. **A. incana,** Willd.

865. **A. serrulata,** Ait.

Very rare. A few specimens on Squaw Is., Niagara R.

Order 89. Salicaceæ.

389. SALIX, Tourn.

866. **S. candida,** Willd.

Rare. Bergen, Gen. Co.; Caledonia, Liv. Co., *Clinton.*

867. **S. tristis,** Ait. ?

868. **S. humilis,** Marshall.

869. **S. discolor,** Muhl.

870. **S. sericea,** Marshall.

871. **S. petiolaris,** Smith.

872. **S. purpurea,** L.

873. **S. cordata,** Muhl.

874. **S. livida,** Wahl., var. **occidentalis,** Gray.

875. **S. lucida,** Muhl.

876. **S. nigra,** Marsh.

Squaw Is., Niagara R., and elsewhere.

877. S. FRAGILIS, L.

878. S. ALBA, L.

879. **S. longifolia,** Muhl. ?

Rare. Pt. Abino, Ont.

880. **S. myrtilloides,** L.

Rare. Near Akron, Erie Co.

390. POPULUS, Tourn.

881. P. ALBA, L.

In cultivation, and spreading by the root.

882. **P. tremuloides,** Michx.

883. **P. grandidenta,** Michx.

884. **P. monolifera,** Ait.

Rather rare. Squaw Is., Niagara R.; near Ft. Erie, Ont., *Clinton.*

885. **P. angulata,** Ait. ?

Found by *J. A. Paine*, at Braddock's Bay, Lake Ontario, Monroe Co., and therefore probably within our territory.

886. **P. balsamifera,** L.

Rather rare. Squaw Is., Niagara R.

The variety **candicans,** Gray, is common in cultivation, but probably not indigenous here.

887. P. DILATATA, L.

Common in cultivation and spreading by the root.

Subclass II. GYMNOSPERMÆ.

Order 90. Coniferæ.

391. PINUS, Tourn.

888. **P. resinosa,** Ait.
Rare. Portage, Wyom. Co.

889. **P. Strobus,** L.

392. TSUGA, Endl.

890. **T. Canadensis,** Carriere. (*Abies Canadensis,* Michx.)

393. ABIES, Tourn.

891. **A. balsamea,** Marshall.
Rare. Collins, Erie Co.

394. PICEA, Link.

892. **P. nigra,** Link.
Rare. Port Colborne, Ont.; Machias, Catt. Co., *Clinton.*

395. LARIX, Tourn.

893. **L. Americana,** Michx.

396. THUJA, Tourn.

894. **T. occidentalis,** L.

397. JUNIPERUS, L.

895. **J. communis,** L.
Rare. Ft. Erie, Ont.; Pt. Abino, Ont.

896. **J. Virginiana,** L.
Rare. Pt. Abino, Ont.; Black Cr., Ont.; Goat Is. and the banks of Niagara R., below the Falls.

897. **J. Sabina,** L., var. **procumbens,** Pursh.
Rare. Bergen Swamp, Gen. Co.; Caledonia, Liv. Co.

398. TAXUS, Tourn.

898. **T. baccata,** L., var. **Canadensis,** Gray.

Class II. ENDOGENÆ.

Order 91. Araceæ.

399. ARISÆMA, Martius.

899. **A. triphyllum,** Torr.

900. **A. Dracontium,** Schott.

Rare. Scajauquady's Cr., east of Main street, Buffalo; Sulphur Spring, W. Seneca, Erie Co., *Clinton;* Portage, Liv. Co., *Clinton;* Salamanca, Catt. Co.

400. PELTANDRA, Raf.

901. **P. Virginica,** Raf.

Rather rare. Southeastern portion of Buffalo, along the lake shore; Niagara Falls, *Clinton;* Caledonia, Liv. Co., *Clinton;* Jamestown, Chat. Co.

401. CALLA, L.

902. **C. palustris,** L.

Rather rare. Near Pine Hill, Cheektowaga, Erie Co.; Port Colborne, Ont.; Hanover, Chat. Co.; near Dayton, Catt. Co., and elsewhere.

402. SYMPLOCARPUS, Salisb.

903. **S. fœtidus,** Salisb.

Formerly abundant in a ravine west of Delaware and south of Virginia street, Buffalo. The station now built over. Tonawanda, Niag. Co., and Tonawanda Is., *Clinton;* Machias, Catt. Co. One plant seen near the L. S. & M. S. R. R. bridge, where it crosses Buffalo R.

403. ACORUS, L.

904. **A. Calamus,** L.

Order 92. Lemnaceæ.

404. LEMNA, L.

905. **L. trisulca,** L.

906. **L. minor,** L.

405. SPIRODELA, Schleiden.

907. **S. polyrrhiza,** Schleiden.

406. WOLFFIA, Horckel, Schleiden.

908. **W. Columbiana,** Karsten. ?

Rare. Niagara R., near Grand Is., Prof. *D. S. Kellicott.* Possibly our plant may prove to be *W. Braziliensis,* Karsten.

Order 93. Typhaceæ.

407. TYPHA, Tourn.

909. **T. latifolia,** L.

910. **T. angustifolia,** L.

Rare. At Whirlpool, Niagara R., American side, *Clinton.*

408. SPARGANIUM, Tourn.

911. **S. eurycarpum,** Engetm.

912. **S. simplex,** Hudson, var. **Nuttallii,** Gray.

Rather rare. Squaw Is., Niagara R.

Order 94. Naiadaceæ.

409. NAIAS, L.

913. **N. flexilis,** Rostk.

410. ZANNICHELLIA, Micheli.

914. **Z. palustris,** L.

In a pond near Ft. Porter, Buffalo; Niagara R., *Clinton.*

411. POTAMOGETON, Tourn.

915. **P. natans,** L.

Rather rare. Niagara R., near Strawberry Is., *Clinton.*

916. **P. hybridus,** Michx.

Rare. Black Cr., Ont., *Clinton.*

917. **P. gramineus,** L., var. **heterophyllus,** Fries.

918. **P. lucens,** L.

Not common. Niagara R.; Lime Lake, Machias, Catt. Co., *Clinton.*

919. **P. prælongus,** Wulfen.

920. **P. perfoliatus,** L.

921. **P. compressus,** L.

922. **P. Niagarensis,** Tuckerman.

Rare. "Rapids above Niagara Falls, *Tuckerman.*" (Gray's Manual.) Not detected by us.

923. **P. pauciflorus,** Pursh.

924. **P. pusillus,** L.

925. **P. pectinatus,** L.

926. **P. Robbinsii,** Oakes.

Order 95. Alismaceæ.

412. TRIGLOCHIN, L.

927. **T. palustre,** L.

Rather rare. Lake shore, near Ft. Erie, Ont.; Strawberry Is., Niagara R., *Clinton.*

928. **T. maritimum,** L., var. **elatum,** Gray.
Rare. Bergen, Gen. Co., *J. A. Paine.*

413. SCHEUCHZERIA, L.

929. **S. palustris,** L.
Rare. Hanover, Chat. Co.

414. ALISMA, L.

930. **A. Plantago,** L., var. **Americanum,** Gray.

415. SAGITTARIA, L.

931. **S. variabilis,** Engelm.

932. **S. heterophylla,** Pursh, var. **rigida,** Gray.

Order 96. Hydrocharidaceæ.

416. ANACHARIS, Richard.

933. **A. Canadensis,** Planchon.

417. VALLISNERIA, Micheli.

934. **V. spiralis,** L.

Order 97. Orchidaceæ.

418. ORCHIS, L.

935. **O. spectabilis,** L.
Rare. W. Seneca, Erie Co.; Williamsville, Erie Co.; Hamburgh, Erie Co.

419. HABENARIA, Willd., R. Br.

936. **H. virescens,** Spreng.

937. **H. viridis,** R. Br. var. **bracteata,** Reichenbach.

938. **H. hyperborea,** R. Br.

939. **H. dilatata,** Gray.
Rare. Hanover, Chat. Co.; Java, Wyom. Co., *Clinton.*

940. **H. Hookeri,** Torr.
Rather rare. Forest Lawn Cemetery, Buffalo; Tonawanda, Erie Co.

941. **H. orbiculata,** Torr.
Rather rare. Near Pine Hill, Cheektowaga, Erie Co.; W. Seneca, Erie Co., *J. F. Cowell;* Hanover, Chat. Co.

942. **H. blephariglottis,** Hook., var. **holopetala,** Gray.
Rare. Hanover, Chat. Co.

943. **H. lacera,** R. Br.

Seemingly rare, but perhaps overlooked. Woods east of Delaware street and north of the Park, Buffalo.

944. **H. psycodes,** Gray.

945. **H. peramœna,** Gray.

Rare. Collins, Erie Co., *J. F. Cowell;* Cassadaga Lake, Chat. Co.

420. GOODYERA, R. Br.

946. **G. repens,** R. Br.

Rare. Southeastern portion of Buffalo; Hanover, Chat Co.; Salamanca, Catt. Co.

947. **G. pubescens,** R. Br.

Rather rare. Near Pine Hill, Cheektowaga, Erie Co., and elsewhere.

421. SPIRANTHES, Richard.

948. **S. latifolia,** Torr.

949. **S. Romanzoviana,** Chamisso. ?

Rare. Hanover, Chat. Co.

950. **S. cernua,** Richard.

951. **S. gracilis,** Bigelow.

Rare. The Plains, Buffalo.

422. LISTERA, R. Br.

952. **L. cordata,** R. Br.

Rare. Spring Brook, Elma, Erie Co., *D. S. Kellicott;* Angola, Erie Co., *Clinton;* "Rock City," near Salamanca, Catt. Co.

423. ARETHUSA, Gronov.

953. **A. bulbosa,** L.

Rare. Hanover, Chat. Co.; Cassadaga Lake, Chat. Co., *Clinton;* Bergen Swamp, Gen. Co.; Machias, Catt. Co.

424. POGONIA, Juss.

954. **P. ophioglossoides,** Nutt.

Rather rare. Hanover, Chat. Co.; Machias, Catt. Co.

955. **P. pendula,** Lindl.

Very rare. W. Seneca, Erie Co., near Smoke's Cr.. Detected only by *Junius S. Smith.*

425. CALOPOGON, R. Br.

956. **C. pulchellus,** R. Br.

Rather rare. Hanover, Chat. Co.; near Akron, Erie Co.; Machias, Catt. Co.

426. CALYPSO, Salisb.

957. **C. borealis,** Salisb.

Very rare. A single plant noticed in Bergen Swamp, by Dr. *C. M. Booth.*

427. MICROSTYLIS, Nutt.

958. **M. monophyllos,** Lindl.

Rare. Machias, Catt. Co.; Bergen, Gen. Co., *J. A. Paine.*

428. LIPARIS, Richard.

959. **L. lilifolia,** Richard.

Very rare. Observed only in a wood near Ft. Erie, Ont.

960. **L. Lœsellii,** Richard.

Rather rare. Strawberry Is., Niagara R., *Clinton;* Hamburgh, Erie Co.; Machias, Catt. Co.; Bergen Swamp, Gen. Co., *J. A. Paine.*

429. CORALLORRHIZA, Haller.

961. **C. innata,** R. Br.

Rare. Near Pine Hill, Cheektowaga, Erie Co.; Cassadaga Lake, Chat. Co.

962. **C. multiflora,** Nutt.

C. Macræi, Gray.

Attributed, by Gray's Manual, to Caledonia Springs, Ont., which brings the plant nearly within our territory. Not detected by us.

430. APLECTRUM, Nutt.

963. **A. hyemale,** Nutt.

Rather rare. The Plains, Buffalo, *Clinton;* Smoke's Cr., W. Seneca, Erie Co.; near Pine Hill, Cheektowaga, Erie Co.

431. CYPRIPEDIUM, L.

964. **C. candidum,** Muhl.

Very rare. Bergen Swamp, Gen. Co., *Clinton.*

965. **C. parviflorum,** Salisb.

966. **C. pubescens,** Willd.

967. **C. spectabile,** Swartz.

Rare. Formerly growing in the Sphagnous Swamp, excavated to form "The Lake" in Buffalo Park. Alden, Erie Co.; Bergen, Gen. Co.; Salamanca, Catt. Co.; Machias, Catt. Co.

968. **C. acaule,** Ait.

Rather rare. Hamburgh, Erie Co.; Eighteen-mile Cr., Evans, Erie Co.; near Port Colborne, Ont.; Cassadaga Lake, Chat. Co.

Order 98. Iridaceæ.

432. IRIS, L.

969. **I. versicolor,** L.

433. PARDANTHUS, Ker.

970. P. Chinensis, Ker.

Spontaneous in gardens, Buffalo.

434. SISYRINCHIUM, L.

971. **S. Bermudiana,** L.

Order 99. Dioscoreaceæ.

435. DIOSCOREA, Plumier.

972. **D. villosa,** L.

Rare. A single specimen observed in the woods east of Delaware street and north of the Park, Buffalo; but said to occur, in considerable quantities, along Niagara R., between Black Rock and Tonawanda, Erie Co., *J. F. Cowell.*

Order 100. Smilaceæ.

436. SMILAX, Tourn.

973. **S. rotundifolia,** L.

Rare. W. Seneca, Erie Co.

974. **S. hispida,** Muhl.

975. **S. herbacea,** L.

Order 101. Liliaceæ.

437. TRILLIUM, L.

976. **T. grandiflorum,** Salisb.

977. **T. erectum,** L.

978. var. **album,** Pursh.

979. **T. erythrocarpum,** Michx.

438. MEDEOLA, Gronov.

980. **M. Virginica,** L.

439. ZYGADENUS, Michx.

981. **Z. glaucus,** Nutt.

Rare. Bergen Swamp, Gen. Co., *Clinton.*

440. VERATRUM, Tourn.

982. **V. viride,** Ait.

441. CHAMÆLIRIUM, Willd.

983. **C. luteum**, Gray.

Rare. The Plains, Buffalo; in woods between Foster Flat and Stanford Station, on the Canada Southern Railway, Ont.

442. TOFIELDIA, Hudson.

984. **T. glutinosa**, Willd.

Rare. Bergen Swamp, Gen. Co., *Clinton*.

443. UVULARIA, L.

985. **U. grandiflora**, Smith.

986. **U. perfoliata**, L.

Rare. Eighteen-mile Cr., Evans, Erie Co.; Silver Lake, Wyom. Co., *Clinton*.

444. OAKESIA, Watson.

987. **O. sessilifolia**, Watson. (*Uvularia sessilifolia*, L.)

445. PROSARTES, Don.

988. **P. lanuginosa**, Don.

446. STREPTOPUS, Michx.

989. **S. roseus**, Michx.

447. CLINTONIA, Raf.

990. **C. borealis**, Raf.

Rather rare. Alden, Erie Co.; Machias, Catt. Co.; "Rock City," near Salamanca, Catt. Co.

991. **C. umbellata**, Torr.

Rare. Hanover, Chat. Co.; "Rock City," near Salamanca, Catt. Co.; Bemus Pt., Chatauqua Lake.

448. SMILACINA, Desf.

992. **S. racemosa**, Desf.

993. **S. stellata**, Desf.

994. **S. trifolia**, Desf.

Rather rare. Black Cr. Swamp, Ont., *Clinton*; Bergen, Gen. Co.; Machias, Catt. Co.

995. **S. bifolia**, Ker.

449. POLYGONATUM, Tourn.

996. **P. biflorum**, Ell.

997. **P. giganteum**, Dietrich.

450. ASPARAGUS, L.

998. A. OFFICINALIS, L.

Frequently escaped; well established near Ft. Erie, Ont.

451. LILIUM, L.

999. **L. Philadelphicum**, L.
1000. **L. Canadense**, L.
1001. **L. superbum**, L.

452. ERYTHRONIUM, L.

1002. **E. Americanum**, Smith.
1003. **E. albidum**, Nutt.

Rare. Forest Lawn Cemetery, Buffalo; W. Seneca, Erie Co.; Alden, Erie Co., Dr. *Ernst Wende*.

453. ALLIUM, L.

1004. **A. tricoccum**, Ait.
1005. **A. Canadense**, Kalm.

454. HEMEROCALLIS, L.

1006. H. FULVA, L.

Occasionally found as a garden outcast. Buffalo and elsewhere.

ORDER 102. JUNCACEÆ.

455. LUZULA, DC.

1007. **L. pilosa**, Willd.
1008. **L. campestris**, DC.

456. JUNCUS, L.

1009. **J. effusus**, L.
1010. **J. Balticus**, Dethard.

Rather rare. Shore of Lake Erie, and Niagara R., Buffalo.

1011. **J. bufonius**, L.
1012. **J. tenuis**, Willd.
1013. **J. articulatus**, L.
1014. var. **pelocarpus**, Gray. (*J. pelocarpus*, E. Meyer.)

Avon, Liv. Co., *Sartwell*.

1015. **J. acuminatus**, Michx.
1016. var. **debilis**, Engelm.
1017. var. **legitimus**, Engelm.
1018. **J. nodosus**, L.
1019. var. **megacephalus**, Torr.
1020. **J. Canadensis**, J. Gay.
1021. var. **coarctatus**, Engelm.

ORDER 103. PONTEDERIACEÆ.

457. PONTEDERIA, L.

1022. **P. cordata**, L.

458. SCHOLLERA, Schreber.

1023. **S. graminea,** Willd.

Order 104. Eriocaulonaceæ.

459. ERIOCAULON, L.

1024. **E. septangulare,** Withering.
Rare. Chatauqua Lake, near Mayville.

Order 105. Cyperaceæ.

460. CYPERUS, L.

1025. **C. diandrus,** Torr.
1026. var. **castaneus,** Torr.
1027. **C. phymatodes,** Muhl.
With us sometimes, if not always, **diandrous.**
1028. **C. strigosus,** L.
1029. **C. Michauxianus,** Schultes.
1030. **C. Schweinitzii,** Torr.
1031. **C. filiculmis,** Vahl.

461. DULICHIUM, Richard.

1032. **D. spathaceum,** Pers.

462. ELEOCHARIS, R. Br.

1033. **E. obtusa,** Schultes.
1034. **E. palustris,** R. Br.
1035. **E. rostellata,** Torr.
Bergen Swamp, Gen. Co., *Clinton.*
1036. **E. tenuis,** Schultes.
1037. **E. acicularis,** R. Br.

463. SCIRPUS, L.

1038. **S. pauciflorus,** L.
Rare. Portage, Gen. Co., on wet rocks near the Falls, *Clinton;* Bergen Swamp, Gen. Co., *J. A. Paine.*
1039. **S. cæspitosus,** L.
Rare. Bergen Swamp, Gen. Co., *Clinton.*
1040. **S. Clintonii,** Gray.
Rare. Northeastern portion of Buffalo.
1041. **S. planifolius,** Muhl.
1042. **S. pungens,** Vahl.
1043. **S. Torreyi,** Olny.
Rather common on Strawberry Is., Niagara R., *Clinton;* Bergen Swamp, Gen. Co., *J. A. Paine.*

1044. **S. validus,** Vahl.

1045. **S. fluviatilis,** Gray.

Rare. Southeastern portion of Buffalo, *Clinton.*

1046. **S. sylvaticus,** L.

1047. **S. atrovirens,** Muhl.

1048. **S. lineatus,** Michx.

1049. **S. Eriophorum,** Michx.

464. ERIOPHORUM, L.

1050. **E. vaginatum,** L.

Rare. Java Lake, Wyom. Co., *Clinton.*

1051. **E. Virginicum,** L.

1052. **E. polystachyon,** L.

var. **angustifolium,** Gray.

Rare. Portage, Wyom. Co., *Clinton.*

1053. **E. gracile,** Koch.

Rare. Hanover, Chat. Co.; Machias, Catt. Co.

465. RHYNCOSPORA, Vahl.

1054. **R. alba,** Vahl.

Rather rare. Hanover, Chat. Co.

1055. **R. capillacea,** Torr.

Rare. Wind-mill Pt., Ont.; Bergen Swamp, Gen. Co., *J. A. Paine.*

466. CLADIUM, P. Browne.

1056. **C. mariscoides,** Torr.

Rare. Near Port Colborne, Ont.; Bergen Swamp, Gen. Co., *Clinton.*

467. SCLERIA, L.

1057. **S. verticillata,** Muhl.

Rare. Bergen Swamp, Gen. Co., *Clinton.*

468. CAREX.

1058. **C. gynocrates,** Wormskiold.

Rare. Bergen Swamp, Gen. Co., *Clinton.*

1059. **C. pauciflora,** Lightfoot.

Rare. Machias, Catt. Co., *Clinton;* Cassadaga Lake, Chat. Co.

1060. **C. polytrichoides,** Muhl.

1061. **C. bromoides,** Schk.

1062. **C. siccata,** Dew.

Rare. Bergen Swamp, Gen. Co., *Clinton.*

1063. **C. disticha,** Huds.

1064. **C. teretiuscula,** Good, var. **major.,** Koch.
Rare. Bergen Swamp, Gen. Co., *Clinton.*

1065. **C. vulpinoidea,** Michx.
1066. **C. stipata,** Muhl.
1067. **C. sparganioides,** Muhl.
1068. **C. Muhlenbergii,** Schk.
1069. **C. rosea,** Schk.
1070. **C. retroflexa,** Muhl.
1071. **C. tenella,** Schk.
Rather rare. Buffalo; Bergen Swamp, Gen. Co., *Clinton.*

1072. **C. trisperma,** Dew.
Rather rare. Wheelbarrow Pt., Buffalo R., *Clinton.*

1073. **C. tenuiflora,** Wahl.
Rare. Near Akron, Erie Co.

1074. **C. canescens,** L.
1075. **C. sterilis,** Willd.
Rare. Bergen Swamp, Gen. Co., *Clinton.*

1076. **C. stellulata,** L.
1077. **C. scoparia,** Schk.
1078. **C. cristata,** Schw.
1079. **C. straminea,** Schk.
1080. **C. aquatilis,** Wahl. ?
1081. **C. torta,** Boott.
1082. **C. stricta,** Lam.
1083. **C. crinita,** Lam.
1084. **C. limosa,** L.
Rather rare. Near Akron, Erie Co.

1085. **C. Buxbaumii,** Wahl.
Rare. Bergen Swamp, Gen. Co., *J. A. Paine.*

1086. **C. aurea,** Nutt.
Rather rare. Wind-mill Pt., Ont., and elsewhere along the shore of Lake Erie.

1087. **C. vaginita,** Tausch.
Rare. Bergen Swamp, Gen. Co,, *Clinton.*

1088. **C. Crawei,** Dew.
Rare. Wind-mill Pt., Ont., *Clinton;* Bergen Swamp, Gen. Co., *J. A. Paine.*

1089. **C. granularis,** Muhl.
1090. **C. pallescens,** L.
1091. **C. grisea,** Wahl.
1092. **C. virescens,** Muhl.
1093. **C. triceps,** Michx.

1094. **C. plantaginea,** Lam.
1095. **C. platyphylla,** Carey.
1096. **C. retrocurva,** Dew.
1097. **C. digitalis,** Willd.
1098. **C. laxiflora,** Lam.
1099. var. **plantaginea,** Boott.
1100. **C. Hitchcockiana,** Dew.
1101. **C. eburnea,** Boott.
1102. **C. pedunculata,** Muhl.
Rare. Near Sulphur Springs, Cheektowaga, Erie Co.
1103. **C. Novæ-Angliæ.** Schw.
1104. **C. Emmonsii,** Dew. ?
1105. **C. Pennsylvanica,** Lam.
1106. **C. pubescens,** Muhl.
1107. **C. miliacea,** Muhl.
1108. **C. scabrata,** Schw.
Rare. Portage, Wyom. Co., *Clinton.*
1109. **C. arctata,** Boott.
1110. **C. debilis,** Michx.
1111. **C. flava,** L.
Rather rare. Near Batavia, *Clinton.*
1112. **C. Œderi,** Ehrh.
Rather rare. Wind-mill Pt., Ont.; Niagara Falls.
1113. **C. filiformis,** L.
Rare. Near Batavia, Gen. Co., *Clinton.*
1114. **C. lanuginosa,** Michx.
1115. **C. riparia,** Curtis.
1116. **C. trichocarpa,** Muhl.
1117. **C. comosa,** Boott.
1118. **C. Pseudo-Cyperus,** L.
1119. **C. hystricina,** Willd.
Rare. Bergen Swamp, Gen. Co., *Clinton.*
1120. **C. tentaculata,** Muhl.
Rare. Bergen Swamp, Gen. Co., *Clinton.*
1121. **C. intumescens,** Rudge.
1122. **C. Grayii,** Carey.
Sheldon, Wyom. Co,, *Clinton.*
1123. **C. lupulina,** Muhl.
1124. **C. lupuliformis,** Sartwell.
1125. **C. folliculata,** L.
1126. **C. retrosa,** Schw.
1127. **C. utriculata,** Boott.
1128. **C. Tuckermani,** Boott.
1129. **C. oligosperma,** Michx.

Order 106. Gramineæ.

469. LEERSIA, Solander.

1130. **L. Virginica,** Willd.

1131. **L. oryzoides,** Swartz.

470. ZIZANIA, Gronov.

1132. **L. aquatica,** L.

471. ALOPECURUS, L.

1133. A. GENICULATUS, L.

1134. **A. aristulatus.** Michx.

Rather rare. Near Port Colborne, Ont.

472. PHLEUM, L.

1135. P. PRATENSE, L.

473. VILFA, Adans., Beauv.

1136. **V. vaginæflora, Torr.**

474. SPOROBOLUS, R. Br.

1137. **S. cryptandrus,** Gray.

475. AGROSTIS, L.

1138. **A. perennans,** Tuckerman.

Rather rare. Alabama Swamp, Gen. Co., *Clinton.*

1139. **A. scabra,** Willd.

1140. **A. vulgaris,** With.

1141. **A. alba,** L.

476. CINNA, L.

1142. **C. arundinacea,** L.

477. MUHLENBERGIA, Schreber.

1143. **M. glomerata,** Trin.

Rare. Niagara Falls, *Clinton.*

1144. **M. Mexicana,** Trin.

Rare. Niagara Falls, *Clinton.*

1145. **M. sylvatica,** Torr. and Gray.

1146. **M. Willdenovii,** Trin.

1147. **M. diffusa,** Schreber.

Whirlpool woods, Niagara R., Ont., *Clinton;* Springville, Erie Co., *Clinton.*

478. BRACHYELYTRUM, Beauv.

1148. **B. aristatum,** Beauv.

479. CALAMAGROSTIS, Adans.

1149. **C. Canadensis,** Beauv.

1150. **C. arenaria,** Roth.
Rare. Rose's Pt., Ont., *Clinton;* Pt. Abino, Ont.

480. ORYZOPSIS, Michx.

1151. **O. melanocarpa,** Muhl.
1152. **O. asperifolia,** Michx.

481. SPARTINA, Schreber.

1153. **S. cynosuriodes,** Willd.

482. TRIPLASIS, Beauv.

1154. **T. purpurea,** Beauv. (*Tricuspis purpurea,* Gray.)
Found only along the shore of Lake Erie.

483. DACTYLIS, L.

1155. D. GLOMERATA, L.

484. CYNOSURUS, L.

1156. C. CRISTATUS, L.
Introduced by means of "Lawn Grass Seed." Buffalo. Precarious.

485. EATONIA, Raf.

1157. **E. obtusata,** Gray.
1158. **E. Pennsylvanica,** Gray.

486. MELICA, L.

1159. **M. mutica,** Walt. ?
Perhaps this grass has been confounded by us with another.

487. GLYCERIA, R. Br., Trin.

1160. **G. Canadensis,** Trin.
1161. **G. elongata,** Trin.
1162. **G. nervata,** Trin.
1163. **G. pallida,** Trin.
1164. **G. aquatica,** Smith.
1165. **G. fluitans,** R. Br.

488. POA, L.

1166. **P. annua,** L.
1167. **P. compressa,** L.
1168. **P. serotina,** Ehrh.
1169. **P. pratensis,** L.
1170. P. TRIVIALIS, L.
1171. **P. sylvestris,** Gray.
1172. **P. alsodes,** Gray.

489. ERAGROSTIS, Beauv.

1173. E. POÆOIDES, Beauv., var. **megastachya,** Gray.
Rare. Near Ft. Erie, Ont.

490. FESTUCA, L.

1174. **F. tenella,** Willd.
Rare. Sand-dunes at Evans, Erie Co., *Clinton.*

1175. **F. ovina,** L., var. **duriuscula,** Gray.

1176. F. ELATIOR, L.

1177. **F. nutans,** Willd.

491. BROMUS, L.

1178. B. SECALINUS, L.

1179. B. RACEMOSUS, L.

1180. B. MOLLIS, L.
Rare. In a lawn, Buffalo, *Clinton.* Hardly established.

1181. **B. Kalmii,** Gray.

1182. **B. ciliatus,** L.

1183. var. **purgans,** Gray.

492. PHRAGMITES, Trin.

1184. **P. communis,** Trin.
Squaw Is., and other islands of Niagara R.

493. LOLIUM, L.

1185. L. PERENNE, L.
Rare. In lawns, Buffalo.

494. TRITICUM, L.

1186. **T. repens,** L.

1187. **T. caninum,** L.

495. HORDEUM, L.

1188. **H. jubatum,** L.
Introduced. Buffalo. Hardly established. Silver Creek, Chat. Co., *E. S. Burgess.*

496. ELYMUS, L.

1189. **E. Virginicus,** L.

1190. **E. Canadensis,** L.

1191. **E. striatus,** Willd.

497. GYMNOSTICHUM, Schreb.

1192. **G. Hystrix,** Schreb.

498. DANTHONIA, DC.

1193. **D. spicata,** Beauv.

499. AVENA, L.

1194. **A. striata,** Michx.

500. AIRA, L.

1195. **A. flexuosa,** L.
1196. **A. cæspitosa,** L.
Rare. Bergen Swamp, Gen. Co., *Paine.*

501. ARRHENATHERUM, Beauv

1197. A. AVENACEUM, Beauv.
Rare. Port Abino, Ont.

502. PHALARIS, L.

1198. P. CANARIENSIS, L.
Accidental and precarious, Buffalo.
1199. **P. arundinacea,** L.

503. MILIUM, L.

1200. **M. effusum,** L.

504. PANICUM.

1201. P. GLABRUM, Gaudin.
1202. P. SANGUINALE, L.
1203. **P. capillare,** L.
1204. **P. virgatum,** L.
1205. **P. latifolium,** L.
1206. **P. clandestinum,** L.
1207. **P. dichotomum,** L.
1208. **P. depauperatum,** Muhl.
1209. **P. Xalapense,** ?
Rare. Northeastern portion of Buffalo, *Clinton.* Probably the remnant of cultivation.
1210. P. CRUS-GALLI, L.
1211. var. HISPIDUM, Gray.

505. SETARIA, Beauv.

1212. S. GLAUCA, Beauv.
1213. S. VIRIDIS, Beauv.
1214. S. ITALICA, Kunth.

506. ANDROPOGON, L.

1215. **A. furcatus,** Muhl.
1216. **A. scoparius,** Michx.

507. SORGHUM, Pers.

1217. **S. nutans,** Gray.

Series II. CRYPTOGAMÆ.

Class III. ACROGENÆ.

Order 107. Equisetaceæ.

508. EQUISETUM, L.

1218. **E. arvense**, L.

1219. **E. sylvaticum**, L.

Rare. Near Sulphur Spring, Cheektowaga, Erie Co.; near Pine Hill, Cheektowaga, Erie Co.

1220. **E. palustre**, L.

Squaw Is., Niagara River.

1221. **E. limosum**, L.

Southeastern portion of Buffalo.

1222. **E. hyemale**, L.

1223. **E. variegatum**, Schleicher.

Rare. Niagara Falls.

1224. **E. scirpoides**, Michx.

Rare. Whirlpool, Niagara River, Ont.

Order 108. Ophioglossaceæ.

509. BOTRYCHIUM, Swartz.

1225. **B. lanceolatum**, Angstrœm.

Rare. Cassadaga Lake, Chat. Co.

1226. **B. Virginianum**, Swartz.

1227. **B. ternatum**, Swartz, var. **lunarioides**, D. C. Eaton.

1228. var. **dissectum**, D. C. Eaton.

510. OPHIOGLOSSUM, L.

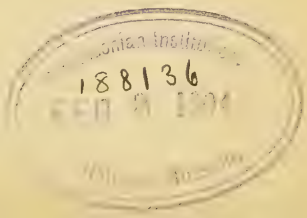
1229. **O. vulgatum**, L.

Rare. The Plains, Buffalo; near Smoke's Creek, West Seneca, Erie Co., *Clinton;* head of Grand Is., Niagara River, *Clinton;* Henrietta, Gen. Co., *J. A. Paine.*

Order 109. Filices.

511. POLYPODIUM, L.

1230. **P. vulgare**, L.



512. ADIANTUM, L.

1231. **A. pedatum,** L.

513. PTERIS, L.

1232. **P. aquilina,** L.

Attaining at Machias, Catt. Co., the height of eight feet and upwards.

514. PELLÆA, Link.

1233. **P. atropurpurea,** Link.

Rare. Niagara River, at and below the Falls.

515. WOODWARDIA, Smith.

1234. **W. Virginica,** Smith.

Rare. Near "Counterfeiters' Ledge," Akron, Erie Co.; Cassadaga, Chaut. Co.

516. ASPLENIUM, L.

1235. **A. Trichomanes,** L.

1236. **A. ebeneum,** Ait.

Rare. Pt. Abino, Ont.; Lewiston, Niag. Co.

1237. **A. angustifolium,** Michx.

Rather rare. Machias, Catt. Co.; Clear Cr., Catt. Co., and elsewhere.

1238. **A. thelypteroides,** Michx.

1239. **A. Filix-fœmina,** Bernh.

517. CAMPTOSORUS, Link.

1240. **C. rhizophyllus,** Link.

Rare. Whirlpool woods and Foster's Flat, Niagara River, Canadian side.

518. PHEGOPTERIS, Fée.

1241. **P. polypodioides,** Fée.

Rare. N. Collins, Erie Co.

1242. **P. hexagonoptera,** Fée.

Rather rare. W. Seneca, Erie Co., and elsewhere.

1243. **P. Dryopteris,** Fée.

Rare. Alden, Erie Co.; Devil's Hole, Niagara River; Machias, Catt. Co.

519. ASPIDIUM, Swartz.

1244. **A. Thelypteris,** Swartz.

1245. **A. Noveboracense,** Swartz.

1246. **A. spinulosum,** Swartz.
1247. var. **intermedium,** Eaton.
1248. **A. cristatum,** Swartz.
1249. var. **Clintonianum,** Eaton.
Detected by Judge Clinton. Locality unrecorded.

1250. **A. Goldianum,** Hook.
1251. **A. marginale,** Swartz.
1252. **A. acrostichoides,** Swartz.
1253. var. **incisum,** Eaton.
Salamanca, Catt. Co., *Clinton.*

520. CYSTOPTERIS, Bernh.

1254. **C. bulbifera,** Bernh.
1255. **C. fragilis,** Bernh.
Smoke's Creek, W. Seneca, Erie Co.; near Youngstown, Niag. Co.; elsewhere not common.

521. STRUTHIOPTERIS, Willd.

1256. **S. Germanica,** Willd.

522. ONOCLEA, L.

1257. **O. sensibilis,** L.

523. DICKSONIA, L'Her.

1258. **D. pilosuiscula,** Willd. (**D. punctilobula,** Kunze.)
Southern towns of Erie Co.

524. OSMUNDA, L.

1259. **O. regalis,** L.
1260. **O. Claytoniana,** L.
1261. **O. cinnamomea,** L.

ORDER 110. LYCOPODIACEÆ.

525. LYCOPODIUM, L.

1262. **L. lucidulum,** Michx.
1263. **L. annotinum,** L.
1264. **L. dendroideum,** Michx.
1265. **L. clavatum,** L.
1266. **L. complanatum,** L.

Order 111. Selaginellaceæ.

526. SELAGINELLA, Beauv.

1267. **S. rupestris,** Spring.

Rare. Cliffs of Niagara River, near the Devil's Hole.

1268. **S. Apus,** Spring.

527. ISOETES, L.

1269. **I. echinospora,** Durieu, var. **Braunii,** Engelm.

Order 112. Salviniaceæ.

528. AZOLLA, Lam.

1270. **A. Caroliniana,** Willd.

Rare. Burnt Ship Bay, Grand Is., Niagara River, *Clinton;* Niagara Falls, Dr. *J. W. Robbins.*

Class IV. ANOGENÆ.

Order 113. Musci.

529. SPHAGNUM, Ehrh.

1271. **S. cymbifolium,** Ehrh.
1272. **S. squarrosum,** Pers.
1273. **S. cuspidatum,** Ehrh.
Hamburgh, Erie Co.
1274. **S. acutifolium,** Ehrh.

530. PHASCUM, L.

1275. **P. muticum,** Schreb.

531. GYMNOSTOMUM, Hedw.

1276. **G. curvirostrum,** Hedw.
Niagara Falls, near the American staircase.

532 WEISIA, Hedw.

1277. **W. viridula,** Brid.
On the edge of a stone quarry east of Forest Lawn Cemetery, Buffalo.

533. SELIGERIA, Br. and Sch.

1278. **S. recurvata,** Br. and Sch.
Devil's Hole, Niagara River; Caledonia, Liv. Co.
1279. **S. calcarea,** Br. and Sch.
Devil's Hole, Niagara Co.

534. CAMPYLOPUS, Brid.

1280. **C. viridis,** Sulliv. and Lesq.

535. DICRANUM, Hedw.

1281. **D. virens,** Hedw.
1282. **D. varium,** Hedw.
Forest Lawn Cemetery, Buffalo; Portage, Gen. Co.
1283. **D. heteromallum,** Hedw.
1284. **D. montanum,** Hedw.
"Goat Is., Niagara Falls, Lesquereux," *Sullivant.*
1285. **D. flagellare,** Hedw.
1286. **D. interruptum,** Br. and Sch.

1287. **D. scoparium,** Hedw.
Eighteen Mile Creek, Evans, Erie Co.; Corfu, Gen. Co.

1288. **D. undulatum,** Turn.

1289. **D. palustre,** Brid.
Rare. Whirlpool, Niagara River, American side.

536. LEUCOBRYUM, Hampe.

1290. **L. glaucum,** L.

537. FISSIDENS, Hedw.

1291. **F. minutulus,** Sulliv.

1292. **F. bryoides,** Hedw.
In a green-house, Buffalo.

1293. **F. taxifolius,** Hedw.
Niagara Falls, *Lesquereux.*

1294. **F. adiantoides,** Hedw.

1295. **F. grandifrons,** Brid.
Niagara Falls, by the American staircase; Goat Is., at the Cascade; Caledonia Creek, Liv. Co., where it grows submerged.

538. CONOMITRIUM, Mont.

1296. **C. Julianum,** Mont.
Smoke's Creek, W. Seneca, Erie Co.

539. POTTIA, Ehrh.

1297. **P. truncata,** Br. and Sch.
Near Forest Lawn Cemetery, Buffalo.

540. DESMATODON, Brid.

1298. **D. arenaceus,** Sulliv. and Lesq.
Rare. Devil's Hole, Niagara River; Foster's Flat, Niagara River; Portage, Wyom. Co.

541. BARBULA, Hedw.

1299. **B. unguiculata,** Hedw.
Near Forest Lawn Cemetery, Buffalo; Whirlpool, Niagara River; Portage, Wyom. Co.

1300. **B. cæspitosa,** Schwægr.

1301. **B. tortuosa,** Web. and Mohr.
Niagara Falls.

1302. **B. mucronifolia,** Schwægr.
Devil's Hole, Niagara River; Portage, Wyom. Co.

542. TRICHOSTOMUM, Br. and Sch.

1303. **T. tortile,** Schrad.

1304. **T. pallidum,** Hedw.
Near the "Forks," Cheektowaga, Erie Co.

543. DIDYMODON, Br. and Sch.

1305. **D. rubellus,** Roth.
Goat Is., Niagara River.

1306. **D. luridus,** Hornsch.
Rare. Niagara Falls, on a dry rock near the shore, from one-eighth to one-fourth of a mile below the American staircase. "This fine species was found by Drummond in 1818 at "Niagara Falls; but had not been detected since that time, "until 1865, when it was re-discovered as shown above." C. H. Peck, in Reg. Rep., 1866.

544. CERATODON, Brid.

1307. **C. purpureus,** Brid.
Forest Lawn Cemetery, Buffalo.

545. TETRAPHIS, Hedw.

1308. **T. pellucida,** Hedw.
Pine Hill, Cheektowaga, Erie Co.

546. ENCALYPTA, Schrad.

1309. **E. streptocarpa,** Hedw.
"Counterfeiter's Ledge," Akron, Erie Co.

547. ORTHOTRICHUM, Hedw.

1310. **O. cupulatum,** Hoff.
On beech trees, Rose's Point, Ont.; "Niagara Falls, Drummond," *Sullivant.*

1311. **O. anomalum,** Hedw.
Rare. Forest Lawn Cemetery, Buffalo; rocks and trees, Niagara Falls.

1312. **O. strangulatum,** Beauv.

1313. **O. Ohioense,** Sull. and Lesq.

1314. **O. affine,** Schrad.

1315. **O. leiocarpum,** Br. and Sch.

1316. **O. Hutchinsiæ,** Hook and Tayl.

1317. **O. Ludwigii,** Schwægr.

1318. **O. crispum,** Hedw.
Hall's Station, Niagara Co.

1319. **O. crispulum,** Hornsch.
Salamanca, Catt. Co.

548. DRUMMONDIA, Hook.

1320. **D. clavellata,** Hook.

549. SCHISTIDIUM, Schp.

1321. **S. apocarpum,** Hedw.

1322. **S. confertum,** Funk.

550. HEDWIGIA, Ehrh.

1323. **H. ciliata,** Ehrh.

551. APHANORHEGMA, Sulliv.

1324. **A. serrata,** Sulliv.

552. PHYSCOMITRIUM, Brid.

1325. **P. pyriforme,** Brid.

553. FUNARIA, Schreb.

1326. **F. flavicans,** Michx.
Rare. Buffalo.

1327. **F. hygrometrica,** Hedw.

1328. var. **calvescens,** Br. and Sch.
Wet, springy places, Buffalo.

554. BARTRAMIA, Hedw.

1329. **B. Muhlenbergii,** Schwægr.
Niagara Falls.

1330. **B. pomiformis,** Hedw.

1331. **B. Œderi,** Swartz.
Akron, Erie Co.; Devil's Hole, Niagara River.

555. BRYUM, Dill.

1332. **B. acuminatum,** Hoppe and Hornsch.
Very rare. "Rock City," near Salamanca, Catt. Co.

1333. **B. nutans,** Schreb.

1334. **B. Wahlenbergii,** Schwægr.

1335. **B. pyriforme,** L.

1336. **B. intermedium,** Brid.
Lockport, Niagara Co.

1337. **B. bimum,** Schreb.
Niagara Falls.

1338. **B. roseum,** Schreb.

1339. **B. capillare,** Hedw.
Buffalo.

1340. **B. cyclophyllum,** Br. and Sch.
Caledonia Creek, near Seth Green's, Liv. Co.

1341. **B. turbinatum,** Hedw.
Very rare. "Wet rocks, below Niagara Falls," *Sullivant.*

1342. **B. cæspiticium,** L.

1343. **B. atropurpureum,** Web. and Mohr.
Very rare. Forest Lawn Cemetery, Buffalo.

556. MNIUM, Br. and Sch.

1344. **M. serratum,** Brid.
Not common. Smoke's Creek, W. Seneca, Erie Co.

1345. **M. lycopodioides,** Hook.

1346. **M. cuspidatum,** Hedw.

1347. **M. affine,** Bland.

1348. **M. spinulosum,** Br. and Sch.

1349. **M. rostratum,** Schwægr.
Devil's Hole, Niagara River.

1350. **M. punctatum,** Hedw.

557. AULACOMNION, Schwægr.

1351. **A. palustre,** Schwægr.

558. TIMMIA, Hedw.

1352. **T. megapolitana,** Hedw.
Near Scajauquady's Creek, Buffalo ; Pine Hill, Cheektowaga, Erie Co.

559. ATRICHUM, Beauv.

1353. **A. undulatum,** Beauv.
Smoke's Creek, W. Seneca, Erie Co.

1354. **A. angustatum,** Beauv.
Smoke's Creek, W. Seneca, Erie Co.

560. POGONATUM, Beauv.

1355. **P. brevicaule,** Brid.
Boston, Erie Co.; Salamanca, Catt. Co.

561. POLYTRICHUM, L.

1356. **P. formosum,** L.

1357. **P. juniperinum,** Hedw.

1358. **P. commune,** L.

562. FONTINALIS, Dill.

1359. **F. antipyretica,** L., var. **gigantea,** Sulliv.
Hall's Station, Niagara Co.; Salamanca, Catt. Co.

1360. **F. Lescurii,** Sulliv. ?
Caledonia, Liv. Co.

563. DICHELYMA, Myrin.

1361. **D. capillaceum,** Dill.
Angola, Erie Co.

564. LEUCODON, Schwægr.

1362. **L. julaceus,** Hedw.

565. LEPTODON, Mohr.

1363. **L. trichomitrion,** Mohr.

566. ANOMODON, Hook and Tayl.

1364. **A. viticulosus,** Hook and Tayl.
Niagara Falls; Whirlpool, Niagara River, Canadian side.

1365. **A. apiculatus,** Br. and Sch.
Akron, Erie Co.

1366. **A. obtusifolius,** Br. and Sch.

1367. **A. attenuatus,** Hartm.

567. LESKEA, Hedw.

1368. **L. polycarpa,** Ehrh.

1369. **L. nervosa,** Schwægr.
Niagara Falls.

1370. **L. rostratra,** Hedw.
Forest Lawn Cemetery, Buffalo.

568. THELIA, Sulliv.

1371. **T. hirtella,** Sulliv.
"The Plains," Buffalo.

1372. **T. asprella,** Sulliv.

569. PYLAISÆA, Schp.

1373. **P. intricata,** Hedw.

1374. **P. velutina,** Schp.

570. HOMALOTHECIUM, Schp.

1375. **H. subcapillatum,** Schp.
Devil's Hole, Niagara River.

571. PLATYGYRIUM, Schp.

1376. **P. repens**, Brid.

572. CYLINDROTHECIUM, Schp.

1377. **C. cladorrhizans**, Hedw.
1378. **C. seductrix**, Hedw.

573. NECKERA, Hedw.

1379. **N. pennata**, Hedw.

574. CLIMACIUM, Web. and Mohr.

1380. **C. Americanum**, Brid.
1381. **C. dendroides**, Web. and Mohr.

575. HYPNUM, L.

1382. **H. tamariscinum**, Hedw.
1383. **H. delicatulum**, C. Mull.
1384. **H. minutulum**, Hedw.
1385. **H. pygmæum**, Bryol. Europ.
Rare. Foster's Flat, Niagara River, Ont.
1386. **H. gracile**, Bryol. Europ.
1387. **H. abietinum**, L.
Niagara Falls and the Whirlpool.
1388. **H. triquetrum**, L.
1389. **B. Blandowii**, Web. and Mohr.
Rare. Caledonia, Liv. Co.
1390. **H. brevirostre**, Ehrh.
1391. **H. splendens**, Hedw.
1392. **H. Alleghaniense**, C. Mull.
Rare. Devil's Hole, Niagara River.
1393. **H. hians**, Hedw.
1394. **H. Sullivantii**, Spruce.
1395. **H. strigosum**, Hoffm.
1396. **H. diversifolium**, Bryol. Europ.
Rare. Near Forest Lawn Cemetery, Buffalo.
1397. **H. serrulatum**, Hedw.
1398. **H. cylindricarpum**, C. Mull.
1399. **H. recurvans**, Schwægr.
1400. **H. cuspidatum**, L.
1401. **H. Schreberi**, Willd.
1402. **H. cordifolium**, Hedw.
1403. **H. giganteum**, Schp.
Caledonia Creek, Liv. Co.

1404. **H. uncinatum,** Hedw.
1405. **H. revolvens,** Swartz.
Bergen Swamp, Gen. Co,; Caledonia, Liv. Co.

1406. **H. aduncum,** Hedw.; var. **giganteum,** Bryol. Europ.
Big Bay, Strawberry Is., Niagara River.

1407. var. **gracilescens.**
Wet, marshy grounds, Buffalo.

1408. **H. filicinum,** L.
1409. **H. Crista-Castrensis,** L.
1410. **H. molluscum,** Hedw.
1411. **H. imponens,** Hedw.
1412. **H. reptile,** Michx.
1413. **H. curvifolium,** Hedw.
1414. **H. Haldanianum,** Grev.
1415. **H. rugosum,** Ehrh.
Rare. Niagara Falls; Whirlpool woods.

1416. **H. nitens,** Schreb.
1417. **H. lætum,** Brid.
1418. **H. acuminatum,** Beauv.
Rare. Portage, Wyom. Co.

1419. **H. rutabulum,** L.
Forest Lawn Cemetery, Buffalo.

1420. **H. plumosum,** L.
1421. **H. rivulare,** Brch.
Rare. Devil's Hole, Niagara River.

1422. **H. stellatum,** Schreb.
Bergen Swamp, Gen. Co.

1423. **H. polymorphum,** Brch.
1424. **H. subtile,** Hoffm.
Whirlpool woods.

1425. **H. minutissimum,** Sulliv. and Lesq.
"Counterfeiter's Ledge," Akron, Erie Co.

1426. **H. Sprucei,** Brch.
Goat Is., Niagara Falls, *James.*

1427. **H. adnatum,** Hedw.
1428. **H. serpens,** Hedw.
1429. **H. radicale,** Brid.
1430. **H. orthocladon,** Beauv.
1431. **H. noterophilum,** Sulliv. and Lesq.
Caledonia, Liv. Co.

1432. **H. riparium**, Hedw.
Smoke's Creek, W. Seneca, Erie Co.

1433. **H. denticulatum**, L.

1434. **H. Muhlenbeckii**, Bryol. Europ.

1435. **H. cariosum**, Sulliv.

Order 114. Hepaticæ.

576. RICCIA, Mich.

1436. **R. natans**, L.
Burnt Ship Bay, Grand Is., Niagara River.

1437. **R. fluitans**, L.
With *R. fluitans*.

1438. **R. sorocarpa**, Bisch.
Forest Lawn Cemetery, Buffalo.

577. LUNULARIA, Mich.

1439. **L. vulgaris**, Mich.
Conservatories, Buffalo.

578. MARCHANTIA, L.

1440. **M. polymorpha**, L.

579. PREISSIA, Nees.

1441. **P. commutata**, Nees.
Niagara Falls, near the American staircase.

580. FEGETALLA, Raddi.

1442. **F. conica**, Corda.
Goat Is., Niagara Falls; Pt. Colborne, Ont.; Bergen, Gen. Co.

581. ANEURA, Dumortier.

1443. **A. palmata**, Nees.

582. PELLIA, Raddi.

1444. **P. epiphylla**, Nees.
Smoke's Creek, W. Seneca, Erie Co.

583. CHILOSCYPUS, Corda.

1445. **C. polyanthos**, Corda.

584. LOPHOCOLEA, Nees.

1446. **L. heterophylla**, Nees.
Portage, Gen. Co.

585. SPHAGNŒCETIS, Nees.

1447. **S. communis,** Nees.
Bergen, Gen. Co.

586. JUNGERMANNIA, L.

1448. **J. curvifolia,** Dickson.
1449. **J. bicuspidata,** L.
Bergen, Gen. Co.
1450. **J. Schraderi,** Martius.

587. PLAGIOCHILA, Nees and Montague.

1451. **P. poreloides,** Lindenb.
Frenchman's Creek, Ont.

588. FRULLANIA, Raddi.

1452. **F. Eboracensis,** Lehm.

589. MADOTHECA, Dumortier.

1453. **M. platyphylla,** Dumort.

590. RADULA, Nees.

1454. **R. complanata,** Dumort.
1455. **R. pallens,** Nees. ?

591. PTILIDIUM, Nees.

1456. **P. ciliare,** Nees.

592. TRICHOCOLEA, Nees.

1457. **T. Tomentella,** Nees.
Bergen Swamp, Gen. Co.; Whirlpool, Ont.

593. MASTIGOBRYUM, Nees.

1458. **M. tridenticulatum,** Lindenb.

594. LEPIDOZIA, Nees.

1459. **L. reptans,** Nees.

Class V. THALLOGENÆ.

Order 116. Lichenes.

595. RAMALINA, Ach.

1460. **R. calicaris**, Fr., var. **fraxinea**, Fr.
1461. var. **farinacea**, Fr.

596. CETRARIA, Ach.

1462. **C. sæpincola**, Ach.
Lime Lake, Machias, Catt. Co.

1463. **C. ciliaris**, Ach.
1464. **C. lacunosa**, Ach.
1465. **C. glauca**, Ach.
1466. **C. Oakesiana**, Tuck.
1467. **C. juniperina**, Ach.
Lime Lake, Machias, Catt. Co.

597. EVERNIA, Ach.

1468. **E. furfuracea**, Mann.
1469. **E. prunastri**, Ach.

598. USNEA, Ach.

1470. **U. barbata**, Fr.
1471. var. **florida**, Fr.
1472. var. **hirta**, Fr.
1473. var. **rubiginea**, Michx.
1474. var. **dasypoga**, Fr.

599. ALECTORIA, Nyl.

1475. **A. jubata**, Ach.
1476. var. **chalybeiformis**, Ach.
1477. var. **implexa**, Fr.

600. THELOSCHISTES, Tuck.

1478. **T. parietinus**, Norm., var. **lychnea**, Schr.
1479. var. **polycarpus**, Fr.
1480. **T. chrysopthalmus**, L.
Niagara Falls.

1481. **candelarius**, Ach., var. **stellata**, Nyl.

601. PARMELIA, De Not.

1482. **P. crinita**, Ach.
1483. **P. perforata**, Ach.

1484. P. perlata, Ach., var. olivitorum, Ach.
1485. P. tiliacea, Ach.
1486. P. Borreri, Turn., var. rudecta, Tuck.
1487. P. saxatilis, Fr.
1488. P. lævigata, Ach.
1489. P. pertusa, Schr.
1490. P. physodes, Ach., var. enteromorpha, Tuck.
1491. P. colpodes, Ach.
1492. P. caperata, Ach.
1493. P. conspersa, Ach.
1494. P. olivacea, Ach.

602. PHYSCIA, Fr.

1495. P. ciliaris, Ach. var. angustata, Tuck.
Niagara Falls.
1496. P. aquila, Nyl. var. detonsa, Tuck.
1497. P. pulverulenta, Nyl., var. pityrea, Fr.
1498. P. speciosa, Wulf., var. stellata, Tuck.
1499. var. hypoleuca, Ach.
1500. var. leucomela, (Escheo.)
1501. var. galactophylla, Tuck.
1502. P. stellaris, Nyl., var. aipola, Schr.
1503. var. astroidea, Tuck., tribacia, Fr.
1504. P. obscura, Nyl.
1505. var. ciliata, Tuck.
1506. var. erythrocardia, Tuck.

603. PYXINE, Fr.

1507. P. cocoes, Nyl., var. sorediata, Tuck.

604. STICTA, Delis.

1508. S. pulmonaria, Ach.
1509. S. glomerulifera, Delis.

605. NEPHROMA, Ach.

1510. N. lævigatum, Ach., var. parile, Ach.
1511. N. tomentosum, Kœrb.
1512. var. Helveticum, Schr.

606. PELTIGERA, Fée.

1513. P. apthosa, Hoffm.
1514. P. canina, Hoffm.
1515. P. polydactyla, Hoffm.
1516. P. rufescens, Hoffm.
1517. P. horizontalis, Hoffm.

607. PANNARIA, Delis.

1518. **P. lanuginosa,** Kœrb.
1519. **P. rubiginosa,** Ach.
1520. **P. lurida,** Nyl.
1521. **P. tryptophylla,** Ach.
1522. **P. microphylla,** Del.
1523. **P. leucosticta,** Tuck.
1524. **P. nigra,** Huds., Nyl.

608. EPHEBE, Fr.

1525. E. ————————

Infertile. Portage, Wyom. Co.

609. SYNALLISSA, Tuck.

1526. S. ————————

Infertile. Portage, Wyom. Co.

610. COLLEMA, (Hoff.) Fr.

1527. **C. pycnocarpum,** Nyl.
1528. **C. cyrtaspis,** Tuck.
1529. **C. microphyllum,** Ach.
1530. **C. nigrescens,** (Huds.) Ach.
1531. **C. pulposum,** (Bernh.) Ach.
1532. **C. limosum,** (Ach.) Nyl.
1533. **C. flaccidum,** Ach.

611. LEPTOGIUM, Fr.

1534. **L. lacerum,** (Sw.) Fr.
1535. **L. pulchellum,** (Ach.) Nyl.
1536. **L. tremelloides,** (L. fil.) Fr.
1537. **L. chloromelum,** (Sw.) Nyl.
1538. **L. myochroum,** (Ehrh.) Schær.
1539. var. **saturninum,** (Dicks.) Tuck.

612. PLACODIUM, (DC.) Næg. and Hepp.

1540. **P. aurantiacum,** (Lightf.) Næg.
1541. **P. cerinum,** (Hedw.) Næg.
1542. var. **stillicidiorum,** Ach.
1543. **P. rupestre,** (Scop.) Nyl.
Niagara Falls.
1544. **P. vitellinum,** (Ehrh.) Ach.

613. LECANORA Ach.

1545. **L. muralis,** (Schreb.) Schær.
1546. **L. tartarea,** Ach., var. arborea.
1547. **L. subfusca,** (L.) Ach.
1548. var. **Hageni,** Ach.
1549. var. **nigrofusca,** Tuck.
1550. **L. Hageni,** Ach.

Niagara Falls.

1551. **L. albella,** Ach., var. angulosa, Fr.
1552. var. **caesio-rubella,** (Ach.)
1553. **L. varia,** (Ehrh.) Fr.
1554. **L. cinerea,** (L.) Sommf.
1555. **L. verrucosa,** (Ach.) Laur.
1556. **L. cervina,** (Pers.) Sommf.
1557. var. **squamulosa,** Fr.
1558. var. **pruinosa,** Ach.
1559. var. **privigna,** Ach.
1560. var. **simplex,** Kœrb.
1561. var. **clavus,** DC.

614. RINODINA, Mass.

1562. **R. sophodes,** (Ach) Moss., var. **confragosa,** Nyl.
1563. **R. Ascociscana,** Tuck.
1564. **R. Bischoffii,** (Hepp.) Kœrb.

Williamsville, Erie Co.

1565. **R. constans,** Nyl.
1566. **R. milliaria,** Tuck.

615. PERTUSARIA, DC.

1567. **P. pertusa,** (L.) Ach.
1568. **P. leioplaca,** Ach.
1569. **P. velata,** (Turn.) Nyl.
1570. **P. pustulata,** Aug.
1571. **P. globularis,** Ach.

616. CONOTREMA, Tuck.

1572. **C. urceolatum,** Tuck.

617. GYALECTA, (Ach.) Anzi.

1573. **G. lutea,** Dicks.
1574. **G. pineti,** Schrad.
1575. **G. cupularis,** (Hedw.) Schær.

618. URCEOLARIA, Flot.

1576. **U. scruposa**, Ach., var. **bryophila**, Ach.
1577. var. **ochroleuca**, Tuck.

619. MYRIANGIUM, Mont. and Berk.

1578. **M. Curtissii**, Mont. and Berk.

620. STEREOCAULON, Schreb.

1579. **S. paschale**, Laur.

621. CLADONIA, Hoffm.

1580. **C. alcicornis**, Fr.
1581. **C. pyxidata**, (L.) Fr.
1582. var. **cæspiticia**, Nyl.
1583. **C. cariosa**, (Ach.) Spreng.
1584. **C. fimbriata**, (L.) Fr.
1585. **C. gracilis**, (L.) Fr.
1586. var. **verticillata**, Fr.
1587. var. **symphicarpa**, Tuck.
1588. **C. mitrula**, Tuck.
1589. **C. furcata**, (Huds.) Fr.
1590. var. **crispata**, Flk.
1591. var. **cristata**, Fr.
1592. var. **racemosa**, Flk.
1593. var. **subulata**, Flk.
1594. **C. squamosa**, Hoffm.
1595. **C. rangiferina**, Hoffm.
1596. var. **sylvatica**, L.
1597. var. **alpestris**, L.
1598. **C. cornucopioides**, Fr.
1599. **C. macilenta**, Hoffm.
1600. **C. cristatella**, Tuck.

622. BÆOMYCES, Pers.

1601. **B. roseus**, Pers.

623. BIATORA, Fr.

1602. **B. Russellii**, Tuck.
1603. **B. coarctata**, (Ach.) Th. Fr.
1604. **B. viridescens**, (Schrad.) Fr.
1605. **B. sanguineo-atra**, Fr.

1606. **B. exigua**, (Chaub.) Fr.
1607. **B. uliginosa**, (Schrad.) Fr.
1608. **B. atropurpurea**, Mass.
1609. **B. hypnophila**, Turn.
1610. **B. rubella**, (Ehrh.) Rabenh.
1611. var. **spadicea**, Tuck.
1612. var. **Schweinitzii**, Tuck.
1613. var. **incompta**, Nyl.
1614. var. **inundata**, Fr.
1615. var. **muscorum**, Nyl.
1616. **B. chlorantha**, Tuck., var. **saxicola**, Willey.

624. HETEROTHECIUM, Flot.

1617. **H. sanguinarium**, (L.), Flot.

625. LECIDEA, Ach.

1618. **L. albo-cœrulescens**, Fr.
1619. **L. contigua**, Fr.
1620. **L. enteroleuca**, Ach.
1621. **L. melancheima**, Tuck.
1622. **L. glaucospora**, Tuck.

626. BUELLIA, De Not.

1623. **B. atro-alba**, (Flot.)
1624. var. **chlorospora**, Nyl.
1625. **B. parasema**, (Ach.) Kœrb.
1626. **B. dialyta**, Nyl.
1627. **B. myriocarpa**, (DC.) Mudd.
1628. **B. turgescens**, Nyl.
1629. **B. albo-atra**, (Hoffm.) Nyl.

627. OPEGRAPHA, Ach.

1630. **O. varia**, (Pers.) Fr.
1631. **O. viridis**, Pers.

628. GRAPHIS, Ach.

1632. **G. scripta**, (L.) Ach.

629. LECANACTIS, Eschw.

1633. **L. premnea**, Ach.
1634. var. **chloroconia**, Tuck.

630. ARTHONIA, Ach.

1635. **A. lecideela**, Nyl.
1636. **A. astroidea**, (Ach.) Nyl.

1637. **A. punctiformis,** Ach.
1638. **A. spectabilis,** Flot.

631. MYCOPORUM, Nyl.

1639. **M. pycnocarpum,** Nyl.

632. CALICIUM, Pers.

1640. **C. brunneolum,** Ach.
1641. **C. curtum,** Turn. and Borr.
1642. **C. lenticulare,** (Hoffm.) Ach.
1643. **C. Curtissii,** Tuck.

633. CONIOCYBE, Ach.

1644. **C. furfuracea,** (L.) Ach.
1645. **C. pallida,** (Pers.) Fr.

634. ENDOCARPON, Hedw.

1646. **E. miniatum,** (L.) Schær.
1647. **E. arboreum,** Schwein.
1648. **E. hepaticum,** Ach.
1649. **E. pusillum,** Hedw.

635. TRYPETHELIUM, Spreng.

1650. **T. virens,** Tuck.

636. SAGEDIA, Kœrb.

1651. **S. oxyspora,** (Nyl.) Tuck.

637. STAUROTHELE, Norm.

1652. **S. Drummondii,** Tuck.
Niagara Falls.

638. VERRUCARIA, Pers.

1653. **V. papillosa,** (Ach.) Kœrb.
1654. **V. margacea,** (Wahl.) Nyl.
1655. **V. nigrescens,** Pers.
1656. **V. virens,** Nyl.
1657. **V. muralis,** Ach.
1658. **V. pyrenophora,** (Ach.) Nyl.

639. PYRENULA, Ach.

1659. **P. thelæna,** (Ach.) Tuck.
1660. **P. punctiformis,** (Ach.) Næg.
1661. **P. gemmata,** (Ach.) Næg.
1662. **P. leucoplaca,** (Wallr.) Kœrb.
1663. **P. nitida,** Ach.

Order 116. Fungi.

BY CHAS. H. PECK, STATE BOTANIST.

The following list of Fungi is based upon specimens collected by Hon. George W. Clinton and identified chiefly by me. Many of the species are represented in the Herbarium of the State Cabinet of Natural History by specimens contributed by Judge Clinton, and have been specially noticed in the Annual Reports of the Regents of the University on the condition of the Cabinet. In view of this fact references are given to places in those Reports where the species have been mentioned.

The rapid progress made in the development of mycological science within the few years just past requires numerous changes in nomenclature. The synonymy incident to the changes, and, in a few instances, to errors of identification, has been given in the list and in a few cases extended even beyond its connection with the Reports mentioned. C. H. P.

Sub-order 1. HYMENOMYCETES.

640. AGARICUS, L.

§ 1. *AMANITA*, Fr.

1664. **A. vaginatus,** Bull. Reg. Rep. 23, p. 69.
Woods.

1665. **A. phalloides,** Fr. Reg. Rep. 23, p. 69.
Woods.

§ 2. *LEPIOTA*, Fr.

1666. **A. procerus,** Scop, Reg. Rep. 23, p. 71.
Woods and fields.

1667. **A. Friesii,** Lasch. Reg. Rep. 26, p. 49.
Woods.

1668. **A. acutesquamosus,** Weinm. Reg. Rep. 23, p. 71.
In a grapery. In the second edition of Epicrisis, Fries makes this a subspecies of the preceding, and indeed the American specimens of the two forms run suspiciously near to each other.

1669. **A. cristatus,** Fr. Reg. Rep. 23, p. 72.
In a grapery, Feb. and March.

1670. **A. Americanus,** Pk. Reg. Rep. 23, p. 71.
Grassy ground, rarely on stumps.

1671. **A. cepæstipes,** Sow. Reg. Rep. 27, p. 92.
Tan bark in Hon. William G. Fargo's greenhouse.

1672. var. **luteus,** Fr.
With the typical form.

1673. **A. granulosus,** Batsch. Reg. Rep. 23, p. 72: ibid. 24, p. 102.
Woods and open places. The forms *A. carcharias* and *A. amianthinus*, which in the first edition of Epicrisis are given as subspecies of *A. granulosus*, in the second, are raised to the rank of species. The latter occurs in the eastern and northern parts of the State and will probably be found in the western part also.

1674. **A. naucinoides,** Pk. Reg. Rep. 29, p. 66. (*A. naucinus*, Fr. Reg. Rep. 23, p. 72.)
Fields and grassy places.

§ 3. *ARMILLARIA*, Fr.

1675. **A. melleus,** Vahl. Reg. Rep. 23, p. 73.
Woods and fields, especially about stumps.

§ 4. *TRICHOLOMA*, Fr.

1676. **A. variegatus,** Scop. Reg. Rep. 23, p. 74.
Woods and pastures, about stumps.

1677. **A. multipunctus,** Pk. Reg. Rep. 25, p. 73.
Old logs in woods.

1678. **A. personatus,** Fr. Reg. Rep. 23, p. 75.
Woods and pastures.

§ 5. *CLITOCYBE*, Fr.

1679. **A. nebularis,** Batsch. Reg. Rep. 23, p. 76.
Pine woods.

1680. **A. clavipes,** Pers. (*A. carinosior*, Pk. Reg. Rep. 23, p. 76. *C. pinus*, Frost, Cat. and Ms.)
Pine woods.

1681. **A. Adirondackenis,** Pk. Reg. Rep. 23, p. 77.
Fallen leaves in woods.

1682. **A. Poculum,** Pk. Reg. Rep. 23, p. 77.
Decaying wood in woods. This scarcely differs from *A. cyathiformis*, Fr., except in not having the stem "fibrillose-reticulated;" but as that is given as an essential mark of the species, it seems best to consider the American plant distinct.

1683. **A. infundibuliformis,** Schaeff. Reg. Rep. 23, p. 76.
Pine woods, etc.

1684. **A. metachrous,** Fr. Reg. Rep. 23, p. 78.
Pine woods.

1685. **A. illudens,** Schw. Reg. Rep. 23, p. 77.
Decaying wood and stumps.

1686. **A. laccatus,** Scop. Reg. Rep. 23, p. 77: ibid. 31, p. 54.
Damp woods and open places. An extremely variable species. Small forms are very unlike the large ones in appearance, but intermediate forms connect them too closely for specific separation. Large forms sometimes approach very near the next species. In both the lamellæ are not infrequently as distinctly emarginate as in species of *Tricholoma*.

1687. **A. ochropurpureus,** Berk. Reg. Rep. 23, p. 77: ibid, 31, p. 34.
Thin woods and open places.

§ 6. *COLLYBIA*, Fr.

1688. **A. radicatus,** Relh. Reg. Rep. 23, p. 79.
Woods, especially of beech.

1689. **A. platyphyllus,** Pers. (*A. hordus*, Fr.) Reg. Rep. 25, p. 73.
Woods, especially about stumps and logs.

1690. **A. velutipes,** Curt. Reg. Rep. 23, p. 79.
Decaying wood and stumps.

1691. **A. dryophilus,** Bull. Reg. Rep. 23, p. 79.
Woods, groves and pastures.

1692. **A. myriadophyllus,** Pk. Reg. Rep. 25, p. 75.
Decaying wood in woods.

1693. **A. cirrhatus,** Schum. Reg. Rep. 23, p. 80.
Vegetable mold and decaying fungi.

1694. **A. tuberosus,** Bull. Reg. Rep. 23, p. 80.
Vegetable mold and decaying fungi.

§ 7. *MYCENA*, Fr.

1695. **A. purus,** Pers. Reg. Rep. 23, p. 82.
Pine woods.

1696. **A. galericulatus,** Scop. Reg. Rep. 23, p. 81.
Decaying wood and ground in woods or damp places.

1697. **A. epipterygius,** Scop. Reg. Rep. 23, p 83.
Woods.

1698. **A. Leaianus,** Berk. Reg. Rep. 24, p. 62.
Decaying beech logs and branches.

1699. **A. leptophyllus,** Pk. Reg. Rep. 24, p. 63.
Mossy logs in woods.

1700. **A. subincarnatus,** Pk. Reg. Rep. 23, p. 83.
Under pine trees.

1701. **A. corticola,** Schum. Reg. Rep. 23, p. 84.
Mossy trunks of living elm, chestnut and apple trees. This fungus revives on the application of moisture, thereby indicating an affinity with species of *Marasmius*.

§ 8. *OMPHALIA*. Fr.

1702. **A. Campanella,** Batsch. Reg. Rep. 23, p 85.
Decaying wood in woods and open places.

1703. **A. Fibula**. Bull. Reg. Rep. 23, p. 86.
Mossy ground in woods and old fields.

1704. **A. gracillimus,** Weinm. Reg. Rep. 25, p. 76.
Fallen leaves and twigs in woods.

§ 9. *PLEUROTUS*, Fr.

1705. **A. sapidus,** Kalchbr. Reg. Rep. 29, p. 38.
Decaying wood, stumps and trunks of trees. The spores of this fungus are lilac-tinted when caught on white paper, but on a dark back-ground they appear sordid-white. The spores of *A. ostreatus* are said to be white. It is probable that these species are frequently confused. I am not sure that we have the true white-spored *A. ostreatus*.

1706. **A. salignus,** Fr. Reg. Rep. 22, p. 77.
Mossy base of trees.

1707. **A. petaloides,** Bull. Reg. Rep. 22, p. 77.
Old logs and stumps.

1708. **A. serotinus,** Schrad. Reg. Rep. 31, p. 54. (*P. serotinoides*, Pk.) Reg. Rep. 23, p. 86.
Old logs in woods. This is a mere form of the preceding species, differing chiefly in wanting the squamulose points on the stem.

1709. **A. porrigens,** Pers. Reg. Rep. 24, p. 64.
Decaying wood in woods.

1710. **A. nidulans,** Pers. (*Panus dorsalis*, Bosc.) Reg. Rep. 22, p. 81; 30, p. 71.
Decaying wood in woods. *A. nidulans*, Pers., and *Panus dorsalis*, Bosc., have evidently been confused, if indeed they are really distinct species. The specimen of "*Panus dorsalis*, Bosc." in Ravenel's Fung. Car. Exsic. II, No. 13, is clearly not distinct from *A. nidulans*, Pers. Our specimens have the beautiful incarnate-colored spores attributed by Fries to *A. nidulans*.

1711. **A. atrocæruleus,** Fr. Reg. Rep. 22, p. 77.
Decaying wood.

1712. **A. applicatus,** Batsch. Reg. Rep. 22, p. 78.
Decaying wood.

1713. **A. striatulus,** Fr. Reg. Rep. 30, p. 39.
Decaying pine wood.

§ 10. *VOLVARIA*, Fr.

1714. **A. bombycinus,** Schæff.
Dead spots in maple trees.

§ 11. *PLUTEUS*, Fr.

1715. **A. cervinus,** Schæff. Reg. Rep. 23, p. 87.
Decaying wood and stumps.

1716. **A. admirabilis,** Pk. Reg. Rep. 24, p. 64.
Old logs in woods.

§ 12. *ENTOLOMA*, Fr.

1717. **A. Grayanus,** Pk. Reg. Rep. 24, p. 64.

§ 13. *CLITOPILUS*, Fr.

1718. **A. abortivus,** B. and C. Reg. Rep. 24, p. 66.
Woods.

§ 14. *LEPTONIA*, Fr.

1719. **A. asprellus,** Fr. Reg. Rep. 24, p. 66.
Swamps and sphagnous marshes.

§ 15. *CLAUDŎPUS*, Sm.

1720. **A. variabilis,** Pers. Reg. Rep. 24, p. 69.
Decaying wood.

§ 16. *PHOLIOTA*, Fr.

1721. **A. adiposus,** Fr. Reg. Rep. 23, p. 90.
Decaying wood.

1722. **A. squarrosus,** Mull. Reg. Rep. 24, p. 67.
Decaying wood.

§ 17. *HEBELOMA*, Fr.

1723. **A. communis,** Pk. Reg. Rep. 23, p. 106: ibid. 30, p. 70.
Woods and open places.

§ 18. *INOCYBE*, Fr.

1724. **A. subochraceus,** Pk. Reg. Rep. 23, p. 95.
Groves and open places.

1725. **A. Colvinii,** Pk. Reg. Rep. 28, p. 49.
Sandy beach of the lake.

§ 19. *FLAMMULA*, Fr.

1726. **A. spumosus,** Fr. (*A. polychrous*, Berk.) Reg. Rep. 23, p. 91.
Pastures, fields and borders of woods.

§ 20. *NAUCORIA*, Fr.

1727. **A. semiorbicularis,** Bull. Reg. Rep. 23, p. 93.
Woods and fields.

1728. **A. autumnalis,** Pk. Reg. Rep. 23, p. 92.
Decaying wood in woods.

§ 21. *GALERA*, Fr.

1729. **A. sphagnorum,** Pers. Reg. Rep. 23, p. 94.
Sphagnous marshes.

§ 22. *CREPIDOTUS*, Fr.

1730. **A. dorsalis,** Pk. Reg. Rep. 24, p. 69.
Decaying wood.

1731. **A. fulvotomentosus,** Pk. Reg. Rep. 26, p. 57.
Decaying wood.

§ 23. *PSALLIOTA*, Fr.

1732. **A. silvaticus,** Schæff. Reg. Rep. 26, p. 59: ibid. 28, p. 85.
Woods.

§ 24. *STROPHARIA*, Fr.

1733. **A. semiglobatus,** Batsch. Reg. Rep. 23, p. 98.
Dung and mushroom beds.

§ 25. *HYPHOLOMA*, Fr.

1734. **A. sublateritius,** Schæff. Reg. Rep. 31, p. 54. (*A. perplexus*, Pk. Reg. Rep. 23, p. 99.)
Old logs and stumps. The differences between *A. sublateritius* and *A. perplexus* are so slight that it seems best to unite them.

1735. **A. appendiculatus,** Bull. (*A. cernuus*, Mull.) Reg. Rep. 23, p. 100.
Decaying wood in woods and open places.

1736. **A. incertus,** Pk. Reg. Rep. 29, p. 40.
Copses and grassy places.

§ 26. *PANÆOLUS*, Fr.

1737. **A. campanulatus,** L. Reg. Rep. 23, p. 102.
Dung heaps.

1738. **A. papilionaceus,** Bull. Reg. Rep. 23, p. 101.
Dung heaps and rich soil.

641. COPRINUS, Fr.

1739. **C. comatus,** Fr. Reg. Rep. 23, p. 103.
Rich or manured ground.

1740. **C. atramentarius,** Bull. Reg. Rep. 22, p. 79: ibid. 24, p. 102.
Rich or manured ground.

1741. **C. tomentosus,** Bull. Reg. Rep. 23, p. 104.
Dung heaps.

1742. **C. semilanatus,** Pk. Reg. Rep. 24, p. 71.
Dung heaps and rich ground.

1743. **C. niveus,** Pers. Reg. Rep. 23, p. 104.
Dung heaps.

1744. **C. micaceus,** Bull. Reg. Rep. 23, p. 104.
On and about old stumps.

642. CORTINARIUS, Fr.

1745. **C. vernalis,** Pk. Reg. Rep. 23, p. 112.
Wet ground in woods and pastures.

643. PAXILLUS, Fr.

1746. **P. atrotomentosus,** Batsch. Reg. Rep. 22, p. 79.
Decaying logs and stumps in woods.

1747. **P. porosus,** Berk,
Ground and decaying wood.

644. HYGROPHORUS, Fr.

1748. **H. ceraceus,** Wulf. Reg. Rep. 23, p. 113.
Open woods.

1749. **H. miniatus,** Fr.
Woods and swamps. I suspect that *H. congelatus,* Reg. Rep. 23, p. 114, is a mere form of this species.

1750. **H. eburneus,** Bull. Reg. Rep. 26, p. 64.
Open woods.

645. LACTARIUS, Fr.

1751. **L. volemus,** Fr. Reg. Rep. 23, p. 116.
Woods and open places. Fries and other continental authors write the specific name "volemus," but some English authors write it "volemum."

1752. **L. camphoratus,** Fr. Reg. Rep. 23, p. 117.
Woods.

646. CANTHARELLUS, Adans.

1753. **C. cibarius,** Fr. Reg. Rep. 23, p. 122.
Woods and grassy places.

1754. **C. aurantiacus,** Wulf. Reg. Rep. 23, p. 123.
Damp woods.

1755. **C. floccosus,** Schw. Reg. Rep. 23, p. 122.
Woods.

1756. **C. minor,** Pk. Reg. Rep. 23, p. 122.
Thin woods.

647. MARASMIUS, Fr.

1757. **M. oreades,** Bolt. Reg Rep. 23, p. 124.
Grassy fields, roadsides, etc.

1758. **M. archyropus**, Pers.
Woods.

1759. **M. erythropus**, Fr. (*M. plancus*, Fr.) Reg. Rep. 23, p. 125.
Woods.

1760. **M. rotula**, Scop. Reg. Rep 23, p. 125.
Dead leaves and sticks.

1761. **M. campanulatus**, Pk. Reg. Rep. 23, p. 126.
Dead leaves and sticks. This may be only a form of *M. siccus*, Schw., from which, if we may rely on Schweinitz's description, it differs in its smaller size, paler stem and not venose lamellæ.

1762. **M. subvenosus**, Pk. Reg. Rep. 23, p. 128.
Fallen leaves of poplar.

1763. **M. resinosus**, Pk. (*M. decurrens*, Pk.) Reg. Rep. 24, p. 77.
Fallen leaves and ground. The name *M. decurrens*, being preoccupied, *M. resinosus* is applied to our plant instead of it.

1764. **M. elongatipes**, Pk. (*M. longipes*, Pk.) Reg. Rep. 26, p. 66.
Fallen leaves in woods. *M. longipes* having been previously employed in connection with another species, *M. elongatipes* is substituted as the name of our plant.

1765. **M. cæspitosus**, Pk. Rep. Rep. 26, p. 65.
Decaying wood and stumps.

1766. **M. minutulus**, Pk. Reg. Rep. 27, p. 97.
Dead ash leaves.

648. LENTINUS, Fr.

1767. **L. lepideus**, Fr. Reg. Rep. 23, p. 126.
Decaying wood and stumps.

1768. **L. Lecomtei**, Fr. Reg. Rep. 22, p. 80: ibid. 24, p. 103.
Decaying wood and stumps.

1769. **L. vulpinus**, Fr. Reg. Rep. 25, p. 80.
Trunks of ash trees.

649. PANUS, Fr.

1770. **P. stypticus**, Bull. Reg. Rep. 22, p. 81.
Decaying wood.

1771. **P. operculatus**, B. and C. Reg. Rep. 27, p. 97: ibid. 30, p. 71.
Dead bark of alders, etc.

650. TROGIA, Fr.

1772. **T. crispa**, Pers. (*Cantharellus crispus*, Fr.) Reg. Rep. 22, p. 80: 23, p. 123.
Dead trunks, stumps and branches.

1773. **T. alni,** Pk. Reg. Rep. 31, p. 54. (*Plicatura alni,* Pk.) Reg. Rep. 24, p. 76.
Dead alders. *Merulins niveus,* Fr., (*Epicrisis,* Edition II, p. 592,) is probably the same species, but its affinity appears to me to be with species of *Trogia* rather than with those of *Merulius.*

651. LENZITES, Fr.

1774. **L. betulina,** L. Reg. Rep. 22, p. 81.
Decaying wood.

1775. **L. sepiaria,** Fr. Reg. Rep. 22, p. 81.
Decaying wood. *L. sepiaria* usually occurs on trunks of acerose trees and *L. vialis* on trunks of frondose trees, but sometimes both depart from their usual habitat.

1776. **L. vialis,** Pk. Reg. Rep. 26, p. 67.
Decaying wood.

652. SCHIZOPHYLLUM, Fr.

1777. **S. commune,** Fr. Reg. Rep. 22, p. 81.
Decaying wood and branches.

653. BOLETUS, Fr.

1778. **B. luteus,** L. Reg. Rep. 23, p. 128.
Sandy Soil.

1779. **B. flavidus,** Fr. Reg. Rep. 23, p. 129.
Woods and open places.

1780. **B. strobilaceus,** Scop. Reg. Rep. 23, p. 132.
Woods and open places.

654. POLYPORUS, Fr.

§ 1. *MESOPUS.*

1781. **P. ovinus,** Schæff. Reg. Rep. 22, p. 81.
Pine woods.

1782. **P. brumalis,** Pers. Reg. Rep. 22, p. 82.
Decaying wood.

1783. **P. perennis,** L. Reg. Rep. 22, p. 82.
Woods and open places.

1784. **P. Morgani,** Frost Ms.
Woods.

§ 2. *PLEUROPUS.*

1785. **P. picipes,** Fr. Reg Rep. 25, p. 82.
Decaying wood.

1786. **P. lucidus,** Fr. Reg. Rep. 22, p. 82.
Decaying wood of hemlock.

§ 3. *MERISMA.*

1787. **P. giganteus,** Pers. Reg. Rep. 22, p. 82.
Base of trees.

1788. **P. frondosus,** Fr. Reg. Rep. 24, p. 78.
Decaying wood.

1789. **P. sulfureus,** Bull. Reg. Rep. 22, p. 82.
Decaying wood.

§ 4. *APUS.*

1790. **P. lacteus,** Fr. Reg. Rep. 22, p. 82.
Old logs.

1791. **P. cæsius,** Schrad. Reg. Rep. 24, p. 79.
Decaying wood and shrubs.

1792. **P. gilvus,** Schw. Reg. Red. 22, p. 82.
Decaying wood.

1793. **P. fumosus,** Pers. Reg. Rep. 24, p. 79.
Decaying wood.

1794. **P. adustus,** Willd. Reg. Rep. 22, p. 82.
Decaying wood.

1795. **P. nigropurpurascens,** Schw. Reg. Rep. 30, p. 75.
Decaying wood. *Glœoporus nigropurpurascens*, Schw. (Rep. 22, p. 84) and *Glœoporus conchoides*, Mont., are other names of this species.

1796. **P. pubescens,** Fr. (*P. Sullivantii*, Mont.) Reg. Rep. 22, p. 84.
Decaying wood.

1797. **P. resinosus,** Schrad. Reg. Rep. 22, p. 83. (*P. rubiginosus*, Schrad. Reg. Rep. 24, p. 79.)
Decaying wood.

1798. **P. albellus,** Pk. Reg. Rep. 30, p. 45.
Decaying wood of birch.

1799. **P. betulinus,** Bull. Reg. Rep. 24, p. 79.
Decaying wood of birch.

1800. **P. applanatus,** Pers. Reg. Rep. 22, p. 83.
Decaying wood.

1801. **P. fomentarius,** L. Reg. Rep. 22, p. 83.
Decaying wood.

1802. **P. igniarius,** L. Reg. Rep. 22, p. 83.
Decaying wood.

1803. **P. conchatus,** Pers. Reg. Rep. 27, p. 98.
Decaying ash wood.

1804. **P. salicinus,** Fr. Reg. Rep. 23, p. 52.
Decaying birch wood.

1805. **P. marginatus,** Fr. Reg. Rep. 24, p. 79.
Decaying wood.

1806. **P. cinnabarinus,** Jacq. Reg. Rep. 22, p. 83,
Decaying wood. This species and *Polyporus perennis* are referred by some mycologists to the genus *Trametes.*

1807. **P. biformis,** Klotsch. Reg. Rep. 22, p. 83. (*P. Caroliniensis*, B. and G., Reg. Rep. 22, p. 83.)
Decaying wood.

1808. **P. hirsutus,** Wulf. Reg. Rep. 22, p. 83.
Decaying wood.

1809. **P. abietinus,** Dicks. Reg. Rep. 22, p. 84.
Decaying wood of acerose trees.

1810. **P. pergamenus,** Fr. (*P. laceratus*, Berk., Reg. Rep. 22, p. 84: *P. elongatus*, Berk., Reg. Rep. 24, p. 79.)
Decaying wood.

1811. **P. versicolor,** L. Reg. Rep. 22, p. 84.
Decaying wood.

1812. **P. conchifer,** Schw. Reg. Rep. 26, p. 69.
Decaying wood.

1813. **P. virgineus,** Schw. Reg. Rep. 22, p. 84.
Decaying wood.

1814. **P. scutellatus,** Schw. Reg. Rep. 22, p. 83.
Decaying wood of alder and witch hazel.

1415. **P. vulgaris,** Fr. Reg. Rep. 27, p. 98.
Decaying wood.

1816. **P. Gordoniensis,** B. and Br. Reg. Rep. 26, p. 70.
Decaying wood.

1817. **P. vaporarius,** Pers. Reg. Rep. 28, p. 84.
Decaying wood.

1818. **P. Vaillantii,** Fr. Reg. Rep. 24, p. 79.
Decaying wood.

1819. **P. salviæ,** B. and C. Reg. Rep. 27, p. 79.
Decaying wood.

1820. **P. vesiculosus,** B. and C. Reg. Rep. 24, p. 79.
Decaying wood.

1821. **P. callosus,** Fr. Reg. Rep. 30, p. 46.
Decaying wood

1822. **P. obducena,** Pers. Reg. Rep. 30, p. 46.
Decaying wood.

1823. **P. induratus,** Pk. Reg. Rep. 31, p. 37.
Decaying wood.

1824. **P. farinellus,** Fr. Reg. Rep. 30, p. 46.
Decaying wood.

1825. **P. nitidus,** Fr. (*P. Armeniacus,* Berk.) Reg. Reg. 26, p. 70.
Decaying wood.

1826. **P. ferruginosus,** Schrad. Reg. Rep. 26, p. 70.
Decaying wood.

1827. **P. incarnatus,** A. and S. Reg. Rep. 27, p. 98.
Decaying wood.

1828. **P. rhodellus,** Fr.
Decaying Wood.

1829. **P. attenuatus,** Pk. Reg. Rep. 26, p. 70.
Decaying wood. This scarcely differs from the preceding except in its smaller pores. It is perhaps a mere variety.

655. TRAMETES, Fr.

1830. **T. mollis,** Sommf. (*Hexagona carbonaria,* B. and C.) Reg. Rep. 26. p. 70.
Decaying wood.

656. DÆDALEA, Fr.

1831. **D. unicolor,** Fr. (*D. cinerea,* Fr.) Reg. Rep. 22, p. 84.
Decaying wood.

1832. **D. confragosa,** Pers. Reg. Rep. 22, p. 84.
Lenzites Cratægi, Berk., (Report 22, p. 81) and *Trametes rubescens,* A. and S., are regarded as mere varieties of this fungus. See Report 30, pp. 71–74.

657. FAVOLUS, Fr.

1833. **F. canadensis,** Klotsch. (*F. Europæus,* Fr.) Reg. Rep. 23, p. 52, *Polyporus Boncheanus,* Fr. Reg. Rep. 22, p. 82; 26, p. 90.
Dead branches of Hickory and beech. For the identification of our specimens I am indebted to the Rev. *C. Kalchbrenner,*

the eminent mycologist of Hungary. The species is variable (see Report 26, p. 90), and the American forms have been generally referred to *Favolus Europæus* and *Polyporus Boncheanus*. Under the former name it has recently been distributed by Mr. Ellis in N. A. Fungi Exsiccati, Cent. VII, No. 604.

658. MERULIUS, Fr.

1834. **M. tremellosus**, Schrad. Reg. Rep. 22, p. 84.
Decaying Wood.

1835. **M. lacrymans**, Wulf. Reg. Rep. 25, p. 82.
Garden pot in stove.

1836. **M. bellus**, B. and C. Reg. Rep. 27, p. 99.
Decaying wood.

1837. **M. porinoides**, Fr. Reg. Rep. 27, p. 99.
Decaying wood.

659. FISTULINA, Bull.

1838. **F. hepatica**, Huds. Reg. Rep. 22, p. 84.
Stumps and base of oak and chestnut trees.

660. HYDNUM, L.

1839. **H. ferrugineum**, Fr. Reg. Rep. 24 p. 80.
Open woods.

1840. **H. coralloides**, Scop. Reg. Rep. 22, p. 85.
Decaying wood.

1841. **H. erinaceum**, Bull. Reg. Rep. 22, p. 85.
Decaying wood.

1842. **H. ochraceum**, Pers. Reg. Rep. 22, p. 85.
Decaying wood.

1843. **H. septentrionale**, Fr. (*H. cirrhatum*, Pers.) Reg. Rep. 22, p.
Decaying wood.

1844. **H. Himantia**, Schw. Reg. Rep. 22, p. 85.
Half buried sticks.

1845. **H. sulphureum**, Schw. Reg. Rep. 26, p. 71.
Decaying wood.

1846. **H. cinnabarinum**, Schw.
Under side of pine logs.

1847. **H. fuscoatrum**, Fr.
Old logs in woods.

1848. **H. mucidum,** Pers. Reg. Rep. 22, p. 85.
Old logs.

661. TREMELLODON, Pers.

1849. **T. gelatinosum,** Scop. (*Hydum gelatinosum*, Scop.) Reg. Rep. 22. p. 85.
Decaying wood in woods.

662. IRPEX, Fr.

1850. **I. lacteus,** Fr. Reg. Rep. 27, p. 99.
Decaying wood.

1851. **I. Tulipiferæ,** Schw. Reg. Rep. 22, p. 85.
Decaying wood.

1852. **I. cinnamomeus,** Fr. Reg. Rep. 22, p. 86.
Decaying wood.

663. PHLEBIA, Fr.

1853. **P. zonata,** B. and C. Reg. Rep. 24, p. 80.
Poplar wood and bark.

1854. **P. radiata,** Fr. Reg. Rep. 24, p. 80.
Trunks of cultivated cherry.

664. GRANDINIA, Fr.

1855. **G. membranacea,** G. and C.
Decaying wood.

665. ODONTIA, Fr.

1856. **O. fimbriata,** Fr. Reg. Rep. 24, p. 80.
Decaying wood.

666. KNEIFFIA, Fr.

1857. **K. setigera,** Fr. Reg. Rep. 24, p. 80.
Decaying wood.

1858. **K. candidissima,** Fr. Reg. Rep. 24, p. 80.
Decaying wood.

667. CRATERELLUS, Fr.

1859. **C. cornucopioides,** Fr. Reg. Rep. 22, p. 86.
Damp places in woods.

1860. **C. lutescens,** Pers. Reg. Rep. 24, p. 81.
Damp woods and swamps.

668. THELEPHORA, Ehrh.

1861. **T. Willeyi,** Clinton. Reg. Rep. 26, p. 71.
Woods.

1862. **T. Schweinitzii,** Pk. Reg. Rep. 29, p. 67. (*T. pallida,* Schw.) Reg. Rep. 22, p. 86.
Woods and fields. *Telephora pallida*, Pers., has priority over *Telephora pallida*, Schw., hence the latter name cannot stand. I have therefore substituted another name for Schweinitzi's species.

1863. **T. sebacea,** Fr. Reg. Rep. 24, p. 81.
Incrusting grasses and low plants.

1864. **T. pedicellata,** Schw.
Twigs and branches of alders.

669. STEREUM, Fr.

1865. **S. purpureum,** Pers. Reg. Rep. 22, p. 86: ibid. 30, p. 75.
Dead trees and branches.

1866. **S. versicolor,** Fr. (*S. fasciatum*, Schw.) Reg. Rep. 22, p. 86.
Decaying wood.

1867. **S. hirsutum,** Willd. Reg. Rep. 22, p. 86.
Decaying wood.

1868. **S. spadiceum,** Fr. Reg. Rep. 22, p. 86.
Decaying wood.

1869. **S. complicatum,** Fr. Reg. Rep. 22, p. 86.
Decaying wood.

1870. **S. striatum,** Fr. Reg Rep. 22, p. 86. (*Thelephora siricea*, Schw.)
Decaying wood.

1871. **S. rugosum,** Pers. Reg. Rep. 24, p. 80.
Old logs and trees.

1872. **S. Curtisii,** Berk. Reg. Rep. 24, p. 80.
Oak trees and branches.

1873. **S. albobadium,** Schw Reg. Rep. 24, p. 80.
Decaying wood.

1874. **S. candidum,** Pk. Reg. Rep. 28, p. 52.
Bark of trees. In Syn. Fung. Car., Schweinitz described this fungus under the name *Thelephora candida.* (1061.) In the same work he described another fungus under the name *Merisma candida.* (1069). In his Syn. Fung. North America, he placed both species in the genus Thelephora and

changed the name of the former to *Thelephora candidissima*. But inasmuch as the present classification again places the two species in different genera, the one in Thelephora, the other in Stereum, we have thought best to adopt the older name for this fungus.

1875. **S. frustulosum,** Fr. Reg. Rep. 22, p. 87.
Decaying wood.

1876. **S. acerinum,** Pers. Reg. Rep. 22, p. 87.
Bark of red cedar.

670. HYMENOCHÆTE, Lev.

1877. **H. rubiginosa,** Schrad. Reg. Rep. 22, p. 86.
This and the two following species were reported as members of the genus *Stereum*.

1878. **H. tabacina,** Sow. Reg. Rep. 22, p. 86.

1879. **H. corrugata,** Fr. Reg. Rep. 23, p. 53.

1880. **H. spreta,** Pk. Reg. Rep. 30, p. 47.

671. CORTICIUM, Fr.

1881. **C. cinereum,** Fr. Reg. Rep. 22, p. 87.
Dead branches.

1882. **C. auberianum,** Mont. Reg. Rep. 24, p. 81.
Dead bark.

1883. **C. lilacino-fuscum,** B. and C. Reg. Rep. 27, p. 99.
Dead bark.

1884. **C. Sambuci,** Fr. Reg. Rep. 30, p. 48.
Dead stems of elder.

1885. **C. polyporoideum,** B. and C.
Old logs.

1886. **C. læve,** Pers.
Old logs.

1887. **C. incarnatum,** Fr. Reg. Rep. 24, p. 80.
Decaying wood and branches.

1888. **C. scutellare,** B. and C. (*C. liquidamberis,* B. and C.) Reg. Rep. 24, p. 81.
Dead bark and branches.

1889. **C. sulfureum,** Fr. Reg. Rep. 29, p. 46.
Decaying wood.

1890. **C. cæruleum,** Schrad. Reg. Rep. 30, p. 48.
Decaying wood.

1891. **C. bicolor**, Pk. Reg. Rep. 26, p. 72.
Decaying wood.

1892. **C. Martianum**, B. and C.
Decaying wood.

1893. **C. salicinum**, Fr. Reg. Rep. 24, p. 81. (*Exidia cinnabarina*, B. and C.) Reg. Rep. 22, p. 88.
Dead willows.

1894. **C. amorphum**, Pers. (*Nodularia balsamicola*, Pk.) Reg. Rep. 24, p. 96.
Dead bark of balsam fir.

1895. **C. Oakesii**, B. and C. Reg. Rep. 22, p. 87.
Bark of oak, ash, etc.

672. CYPHELLA, Fr.

1896. **C. fulva**, B. and R. Reg. Rep. 24, p. 83.
Dead alders.

673. SOLENIA, Pers.

1897. **S. candida**, Pers. Reg. Rep. 22, p. 95.
Decaying wood.

1898. **S. fasciculata**, Pers.
Decaying wood.

1899. **S. ochracea**, Hoffm. Reg. Rep. 25, p. 83.
Decaying wood.

1900. **S. anomala**, Pers. (*Peziza anomala*, Pers.) Reg. Rep. 23, p. 62.
Decaying wood and bark.

674. CLAVARIA, L.

1901. **C. Kunzei**, Fr. Reg. Rep. 24, p. 81.
Woods.

1902. **C. tetragona**, Schw. Reg. Rep. 24, p. 82.
Woods.

1903. **C. pyxidata**, Pers.
Woods.

1904. **C. aurea**, Schæff. Reg. Rep. 22, p. 87.
Woods.

1905. **C. spinulosa**, Pers. Reg. Rep. 22, p. 82.
Woods.

1906. **C. apiculata**, Fr. Reg. Rep. 24, p. 82.
Decaying wood.

1907. **C. fusiformis**, Sow. Reg. Rep. 23, p. 53.
Damp woods and Swamps.

1908. **C. inæqualis**, Mull. Reg. Rep. 22, p. 87.
Damp woods and Swamps.

1909. **C. pistillaris**, L. Reg. Rep. 23, p. 53.
Woods.

1910. **C. Ligula**, Schæff. Reg. Rep. 24, p. 82.
Woods.

1911. **C. fistulosa**, Fr. Reg. Rep. 26, p. 72.
Woods.

1912. **C. pulchra**, Pk. Reg. Rep. 28, p. 53.
Woods and damp places.

1913. **C. mucida**, Pers. Reg. Rep. 24, p. 82.
Damp decaying wood.

675. CALOCERA, Fr.

1914. **C. viscosa**, Pers. Reg. Rep. 24, p. 82.
Decaying wood.

1915. **C. cornea**, Batsch. Reg. Rep. 24, p. 82.
Decaying wood.

1916. **C. palmata**, Schum. Reg. Rep. 24, p. 82.
Decaying wood.

676. TYPHULA, Pers.

1917. **T. muscicola**, Pers. (*Pistillaria muscicola*, Pers.) Reg. Rep. 22, p. 87.
Mosses, especially *Climacium Americanum*.

677. PHYSALACRIA, Pk.

1918. **P. inflata**, Schw. (*Mitrula inflata*, Schw.) Reg. Rep. 27, p. 47.
Decaying wood and bark.

678. TREMELLA, Dill.

1919. **T. aurantia**, Schw. Reg. Rep. 22, p. 88.
Dead spruce and pine.

1920. **T. mesenterica**, Retz. Reg. Rep. 22, p. 88.
Decaying wood.

1921. **T. albida**, Huds. Reg. Rep. 25, p. 83.
Decaying wood.

1922. **T. foliacea,** Pers. Reg. Rep. 24, p. 80.
Decaying wood.

1923. **T. frondosa,** Fr. Reg. Rep. 26, p. 72.
Decaying wood.

1924. **T. vesicaria,** Bull. Reg. Rep. 28, p. 53.
Damp shaded ground.

679. EXIDIA, Fr.

1925. **E. glandulosa,** Bull. Reg. Rep. 22, p. 88.
Dead trunks and branches.

1926. **E. repanda,** Fr.
Dead trunks and branches.

680. NÆMATELIA, Fr.

1927. **N. nucleata,** Schw. Reg. Rep. 24, p. 83.
Dead trunks and branches.

681. GUEPINIA, Fr.

1928. **G. spathularia,** Fr. Reg. Rep. 24, p. 80.
Decaying wood.

682. DITIOLA, Fr.

1929. **D. radicata,** Fr. Reg. Rep. 27, p. 101.
Decaying pine wood.

683. DACRYMYCES, Nees.

1930. **D. stillatus,** Nees. Reg. Rep. 22, p. 88.
Decaying wood.

1931. **D. deliquescens,** Duby. (*D. tortus* Fr.) Reg. Rep. 22, p. 88.
Decaying wood.

1932. **D. fragiformis,** Nees. Reg. Rep. 27, p. 101.
Decaying wood.

1933. **D. minor,** Pk. Reg. Rep. 30, p. 49.
Decaying wood.

684. EXOBASIDIUM, Wor.

1934. **E. Cassandræ,** Pk. Reg. Rep. 29, p. 46.
Living leaves of *Cassandra calyculata*.

Sub-order 2. GASTEROMYCETES.

685. PHALLUS, L.

1935. **P. Ravenelii,** B. & C.
Woods.

686. CLATHRUS, Mich.

1936. **C. cancellatus,** L.
Ground.

687. TULOSTOMA, Pers.

1937. **T. mammosum,** Fr.
Sandy soil.

688. GEASTER, Mich.

1938. **G. saccatus,** Fr. Reg. Rep. 23, p. 53.
Woods.

689. BOVISTA, Dill.

1939. **B. plumbea,** Pers. Reg. Rep. 22, p. 88.
Grassy fields.

690. LYCOPERDON, Pers.

1940. **L. giganteum,** Batsch.
Fields and gardens.

1941. **L. cyathiforme,** Bosc. (*L. giganteum*, Batsch.) Reg. Rep. 23, p, 53; (*L. albopurpureus*, Frost Cat.)
Fields and pastures.

1942. **L. pedicellatum**, Pk. Reg. Rep. 26, p. 73.
Decaying wood and ground in woods.

1943. **L. Wrightii,** B. & C. Reg. Rep. 22, p. 88.
Fields and grassy places.

1944. **L. gemmatum,** Batsch. Reg. Rep. 22, p. 88.
Ground and old stumps.

1945. **L. pyriforme,** Schæff. Reg. Rep. 22, p. 88.
Ground and decaying wood.

1946. **L. pusillum,** Fr.
Fields and pastures.

691. SCLERODERMA, Pers.

1947. **S. vulgare,** Fr. Reg. Rep. 24, p. 89.
Ground and decaying wood.

1948. **S. bovista,** Fr.
Ground.

692. PHYSARUM, Pers.

1949. **P. cinereum,** Batsch. (*Didymium cinereum*, Fr.) Reg. Rep. 23, p. 53.
Moss, grass, bark, etc.

1950. **P. contextum,** Pers. (*Diderma flavidum*, Pk.) Reg. Rep. 28, p. 54.
Decaying wood.

1951. **P. sinuosum,** Bull. (*Angioridium sinuosum*, Grev.) Reg. Rep. 26, p. 75.
Moss, sticks, etc.

693. TILMADOCHE, Fr.

1952. **T. nutans,** Pers. (*Physarum nutans*, Pers.) Reg. Rep. 22, p. 89.
Decaying wood.

694. CRATERIUM, Trent.

1953. **C. leucocephalum,** Pers. Reg. Rep. 26, p. 75.
Moss, sticks, etc.

695. BADHAMIA, Berk.

1954. **B. rubiginosa,** Chev. (*Crotereum obovatum*, Pk.) Reg. Rep. 26, p. 75.
Decaying wood and leaves.

696. DIDYMIUM, Schrad.

1955. **D. eximium,** Pk. Reg. Rep. 31, p. 41.
Ash wood.

697. FULIGO, Hall.

1956. **F. varians,** Sommf. (*Æthalium septicum*, Fr.) Reg. Rep. 22, p. 89.
Æ. vaporarium, Fr.
Decaying wood. etc. Tan bark in stoves.

698. CHONDRIODERMA. Rost.

1957. **C. testaceum,** Fr. (*Ciderma Mariæ-Wilsoni*, Clinton.) Reg. Rep. 26, p. 74.
Mosses, stems and Leaves.

1958. **C. spumarioides,** Fr. (*Didermia farinaceum,* Pk.) Reg. Rep. 26, p. 74.
Leaves and bark.

699. LEOCARPUS, Lk.

1959. **L. fragilis,** Dicks. (*L. vermicosus,* Pers.) Reg. Rep. 23, p. 53.
Sticks, leaves and wood.

700. DIACHÆA, Fr.

1960. **D. leucopoda,** Bull. (*D. elegans,* Fr.) Reg. Rep. 23, p. 54.
Leaves, moss, etc , living or dead.

701. STEMONITIS, Gled.

1961. **S. fusca,** Roth. Reg. Rep. 24, p. 84.
Decaying wood.

1962. **S. ferruginea,** Ehrh. Reg. Rep. 22, p. 89.
Decaying wood.

702. COMATRICHA, Preuss.

1963. **C. typhina,** Roth. (*Stemonitis typhoides,* DC.) Reg. Rep. 25, p. 83.
Decaying wood.

703. LAMPRODERMA, Rost.

1964. **L. physaroides,** A. & S. Reg. Rep. 29, p. 47.
Decaying wood.

1965. **L. arcyrioides** var. **iridea,** Cke.
Dead branchlets of *Vitis.*

704. TUBULINA, Pers.

1966. **T. cylindrica,** Bull. (*Licea cylindrica,* Bull.) Reg. Rep. 26, p. 76.
Decaying wood.

705. TRICHIA, Hall.

1967. **T. chrysosperma,** Bull. Reg. Rep. 24, p. 84.
Decaying wood.

1968. **T. varia,** Pers. Reg. Rep. 24, p. 84.
Decaying wood.

1969. **T. fallax,** Pers. Reg. Rep. 30, p. 50.
Decaying wood.

706. ARCYRIA, Hill.

1970. **A. punicea,** Pers. Reg. Rep. 24, p. 84.
Decaying wood.

1971. **A. incarnata,** Pers. Reg. Rep. 25, p. 84.
Decaying wood.

1972. **A. cinerea,** Bull. Reg. Rep. 22, p. 89. (*A. digitata*, Schw.) Reg. Rep. 23, p. 53.
Decaying wood.

707. HEMIARCYRIA, Rost.

1973. **H. clavata,** Pers. (*Trichia clavata*, Pers.) Reg. Rep. 22, p. 89.
Decaying wood.

1974. **H. rubiformis,** Pers. (*Trichia rubiformis*, Pers.) Reg. Rep. 22, p. 89. (*T. pyriformis*, Hoff.) Reg. Rep. 25, p. 84.
Decaying wood.

1975. **H. serpula,** Scop. (*Trichia serpula*, Pers.) Reg. Rep. 24, p. 84.
Decaying wood.

708. PERICHÆNA, Fr.

1976. **P. irregularis,** B. and C. Reg. Rep. 30, p. 50.
Decaying wood and bark.

1977. **P. cæspitosa,** Pk. (*Physarum cæspitosum*, Pk.) Reg. Rep. 26, p. 75 : ibid. 28, p. 85.
Decaying wood.

709. LYCOGALA, Mich.

1978. **L. epidendrum,** Bux. Reg. Rep. 22, p. 89.
Decaying wood.

710. PTYCHOGASTER, Cd.

1979. **P. albus,** Cd. Reg. Rep. 22, p. 90.
Decaying wood.

711. CYATHUS, Pers.

1980. **C. striatus,** Hoffm. Reg Rep. 23, p. 54.
Decaying wood and sticks.

1981. **C. vernicosus,** DC. (*C. campanulatus*, Fr.) Reg. Rep. 22. p. 90.
Ground, manured places, etc.

712. CRUCIBULUM, Tul.

1982. **C. vulgare,** Tul. Reg. Rep. 22, p. 90.
Decaying wood.

713. SPHAEROBOLUS, Tode.

1983. **S. stellatus,** Tode.
Spent hops and decaying wood.

SUB-ORDER 3. CONIOMYCETES.

714. SACIDIUM, Nees.

1984. **S. Pini,** Fr. Reg. Rep. 31, p. 43.
Dead balsam-fir leaves.

715. PHOMA, Fr.

1985. **P. nebulosum,** Berk. Reg. Rep. 29, p. 47.
Dead stems of nettle.

1986. **P. Mariæ,** Clinton. Reg. Rep. 28, p. 55.
Living branches of *Lonicera Tatarica.*

1987. **P. lineolatum,** Desm. (*Phoma strobilima*, P. and C.) Reg. Rep. 30, p. 51.
Pine cones.

1988. **P. stercoraria,** P. and C. Reg. Rep. 30, p. 51.
Dung of geese.

1989. **P. longissimum,** Pers. Reg. Rep. 24, p. 99.
Dead stems of *Chenopodium album.*

1990. **P. Verbascicola,** Schw. (*Sphæria verbascicola.*) Reg. Rep. 22, p. 100.
Dead stems of *Verbascum Thapsus.*

1991. **P. hysteriellum,** P. and C.
Dead stems of herbs.

716. PECKIA, Clinton.

1992. **P. Sarraceniæ,** P. and C. Reg. Rep. 29, p. 47.
Dead stems of *Sarracenia purpurea.*

1993. **P. Clintonii,** Pk. Reg. Rep. 29, p. 47.
Dead leaves of *Smilacina trifolia.*

717. CRYPTOSPORIUM, Kunze.

1994. **C. Noveboracense,** B. and C. Reg. Rep. 29, p. 47.
Bark of *Abies balsamea.*

1995. **C. Scirpi,** Pk. Reg. Rep. 25, p. 84.
Leaves of *Scirpus.*

718. GELATINOSPORIUM, Pk.

1996. **G. betulinum,** Pk. Reg. Rep. 25, p. 84.
Dead branches of *Betula lenta.* Probably *Sphæronema seriatum,* B. and C., is the same species.

1997. **G. abietinum,** Pk. Reg. Rep. 25, p. 84.
Dead branches of *Abies Canadensis.*

719. SPHÆRONEMA, Tode.

1998. **S. subtile,** Fr. Reg. Rep. 24, p. 85.
Decaying wood.

1999. **S. Robiniæ,** B. and C. Reg. Rep. 30, p. 51.
Dead twigs of *Tilia* and *Robinia.*

2000. **S. Fraxini,** Pk. Reg. Rep. 29, p. 71. (*S. spina,* B. and C. Reg. Rep. 23, p. 54.)
Dead branches of ash.

2001. **S. Persicæ,** Fr. (*Sphorocybe Persicæ,* Fr.) Reg. Rep. 23, p. 61.
Dead bark of cherry and peach trees.

720. SPHÆROPSIS, Lev.

2002. **S. quercina,** Pk. Reg. Rep. 25, p. 86.
Dead branches of oak.

2003. **S. Sumachi,** Schw. (*S. pulchella,* B. and C. Reg. Rep. 24, p. 86. *Sphæria Sumachi,* Schw.)
Dead branches of *Rhus glabra.*

2004. **S. Macluræ,** Cke.
Dead branches of Osage orange.

2005. **S. Menispermi,** Pk. Reg. Rep. 24, p. 86.
Dead stems of *Menispermum Canadense.*

2006. **S. Clintonii,** Pk. Reg. Rep. 28, p. 55.
Decorticated maple.

2007. **S. Wilsoni,** Clinton. (*S. punctum,* C. and E.) Reg. Rep. 28, p. 55.
Living stems of *Lonicera flava.*

2008. **S. Squieriæ,** Clinton. Reg. Rep. 28, p. 55.
Dead stems of *Aristolachia.*

2009. **S. Syringæ,** P. and C. Reg. Rep. 30, p. 52.
Dead twigs of *Syringa vulgaris.*

2010. **S. Pennsylvanica,** B. and C. Reg. Rep. 30, p. 51.
Dead twigs of ash.

2011. **S. Malorum,** Berk. Reg. Rep. 25, p. 85.
Decaying apples.

2012. **S. pulchrispora,** P. and C.
Dead stems of *Polygonum.*

721. DIPLODIA, Fr.

2013. **D. vulgaris,** Lev. Reg. Rep. 26, p. 76.
Decaying wood.

2014. **D. Herbarum,** Lev. Reg. Rep. 28, p. 56.
Dead stems of herbs.

2015. **D. Viticola,** Desm. Reg. Rep. 22, p. 90.
Dead stems of *Vitis.*

2016. **D. thujina,** P. and C. Reg. Rep. 30, p. 52.
Wood of *Thuja occidentalis.*

722. HENDERSONIA, Berk.

2017. **H. Mariæ,** Clinton. Reg. Rep. 28, p. 57.
Living stems of *Lonicera flava.*

2018. **H. Peckii,** Clinton. Reg. Rep. 28, p. 56.
Living stems of *Lonicera flava.*

2019. **H. Sarmentorum,** West. Reg. Rep. 28, p. 56.
Dead grape vines.

2020. **H. Desmazierii,** Mont. (*H. Platani,* Pk.) Reg. Rep. 25, p. 86.
Bark of *Platanus occidentalis.*

2021. **H. Coluteæ,** P. and C.
Twigs of *Colutea arborescens.*

723. VERMICULARIA, Tode.

2022. **V. dematium,** Fr. Reg. Rep. 24, p. 86.
Dead stems and leaves.

2023. **V. coptina,** Pk. Reg. Rep. 28, p. 58.
Dead or dying leaves of *Coptis trifolia.*

2024. **V. concentrica,** P. and C. Reg. Rep. 29, p. 47.
Languishing leaves of *Trillium.*

2025. **V. albomaculata,** Schw.
Leaves of *Smilax herbacea.*

2026. **V. Petiolorum,** Schw.
Dead petioles.

2027. **V. trichella,** Grev. Reg. Rep. 31, p. 43.
Ivy leaves.

2028. **V. compacta,** C. and E.
Dead grape vine.

2029. **V. Balsamitæ,** Schw.
Dead stems of *Impatiens.*

2030. **V. Polygonati,** Schw.
Dead stems of *Polygonatum.*

724. DISCOSIA, Lib.

2031. **D. artocreas,** Fr. Reg. Rep. 24, p. 86.
Dead leaves.

2032. **D. rugulosa,** B. and C. Reg. Rep. 29, p. 48.
Dead leaves of *Carya alba.*

725. SEPTORIA, Fr.

2033. **S. Nabali,** B. and C. Reg. Rep. 24, p. 87.
Leaves of *Nabalus.*

2034. **S. Polygonorum,** Desm.
Leaves of *Polygonum orientale.*

2035. **S. Rhoidis,** B. and C. Reg. Rep. 28, p. 57.
Leaves of *Rhus typhina.*

2036. **S. Rubi,** West. (*S. Rubi,* B. and C.) Reg. Rep. 23, p. 54.
Leaves of *Rubus strigosus, villosus,* etc.

2037. **S. Liriodendri,** B and C. Reg. Rep. 23, p. 54.
Leaves of *Liriodendron Tulipifera.* I have seen no description of this species. The next following species appears also to have a mere catalogue or manuscript name.

2038. **S. Verbascicola,** B. and C. Reg. Rep. 28, p. 57.
Leaves of *Verbascum Blattaria.*

2039. **S. Lobeliæ,** Pk. Reg. Rep. 24, p. 87.
Leaves of *Lobelia.*

2040. **S. Verbenæ,** D. and R. Reg. Rep. 27, p. 101.
Leaves of *Verbena hastata.*

2041. **S. viride-tingens,** Curt. Reg. Rep. 23, p. 55.
Leaves of *Allium tricoccum.*

2042. **S. mirabilis,** Pk. Reg. Rep. 25, p. 87.
Fronds of *Onoclea sensibilis.*

2043. **S. Wilsoni,** Clinton. Reg. Rep. 28, p. 57.
Leaves of *Chelone glabra.*

2044. **S. Scrophulariæ,** Pk. Reg. Rep. 28, p. 57.
Leaves of *Scrophularia nodosa.*

2045. **S. sambucini,** Pk. Reg. Rep. 28, p. 57.
Leaves of *Sambucus Canadensis.*

2046. **S. Coptidis,** B. and C.
Leaves of *Coptis trifolia.*

2047. **S. Polygalæ,** P. and C. Reg. Rep. 29, p. 48.
Leaves of *Polygala paucifolia.*

2048. **S. emaculata,** P. and C. Reg. Rep. 29, p. 48.
Leaves of *Lathyrus palustris.*

2049. **S. Erigerontis,** Pk. Reg. Rep. 24, p. 87.
Leaves of *Erigeron strigosum* and *annuum.*

2050. **S. Violæ,** West. Reg. Rep. 24, p. 87.
Leaves of *Viola cucullata.*

2051. **S. Dianthi,** Desm.
Leaves of *Dianthus barbatus.*

2052. **S. phlyctænoides,** B. and C. Reg. Rep. 24, p. 87.
Dead stems of herbs.

2053. **S. salicina,** Pk. Reg, Rep. 25, p. 87.
Leaves of *Populus balsamifera.*

2054. **S. Waldsteiniæ,** P. & C. Reg. Rep. 31, p. 43.
Leaves of *Waldsteinia fragarioides.*

2055. **S. Hippocastani,** B. and Br. Reg. Rep. 24, p. 87.
Leaves of horse-chestnut.

2056. **S. Toxicodendri,** Curt.
Leaves of *Rhus Toxicodendron.* This species does not appear to have been described.

2057. **S. Kalmicola,** Schw. (*Sphæria Kalmicola,* Schw.) Reg. Rep. 23, p. 64.
Leaves of *Kalmia latifolia.*

2058. **S. Œnotheræ,** West.
Leaves of *Œnothera biennis,*

726. PHYLLOSTICTA, Pers.

2059. **P. cruenta,** Fr. (*Septoria cruenta,* Kze.) Reg. Rep. 22, p. 101.
Leaves of *Polygonatum* and *Smilacina.*

2060. **P. ochroleuca,** B. and C. (*Septoria ochroleuca,* B. and C.) Reg. Rep. 25, p. 88.
Leaves of chestnut.

727. EXCIPULA, Fr.

2061. **E. Equiseti,** Pk. Reg. Rep. 26, p. 77.
Dead *Equisetum hyemale.*

728. DINEMASPORIUM. Lev.

2062. **D. Herbarum,** Cke. Reg. Rep. 25, p. 88.
Dead stems of herbs.

2063. **D. acerinum,** Pk. Reg. Rep. 26, p. 77.
Maple wood.

729. ASTEROMA, DC.

2064. **A. Rosæ,** DC. Reg. Rep. 28, p. 58.
Leaves of *Rosa rubiginosa.*

730. MELANCONIUM, Lk.

2065. **M. disseminatum,** Fr. Reg. Reg. 28, p. 59.
Decaying wood.

2066. **M. minutissimum,** Schw. Reg. Rep. 28, p. 59.
Bark of *Platanus occidentalis.*

2067. **M. oblongum,** Berk. Reg. Rep. 28, p. 59.
Bark of *Juglans cinerea.*

2068. **M. intermedium,** P. and C. Reg. Rep. 30, p. 53.
Bark of *Carya alba.*

2069. **M. Americanum,** P. and C. Reg. Rep. 31, p. 43.
Dead leaves of *Agave Americana.*

731. STILBOSPORA, Pers.

2070. **S. ovata,** Pers. Reg. Rep. 22, p. 90.
Dead branches.

2071. **S. Staphyleæ,** Schw. Reg. Rep. 25, p. 88.
Dead branches of *Staphylea trifolia.*

732. EXOSPORIUM, Lk.

2072. **E. Tiliæ,** Lk. (*Coryneum clavæsporium,* Pk.) Reg. Rep. 24, p. 87.
Dead branches of *Tilia Americana.*

733. CORYNEUM, Kze.

2073. **C. disciforme,** Kze. Reg. Rep. 28, p. 59.
Dead branches.

2074. **C. triseptatum,** Pk. Reg. Rep. 27, p. 102.
Dead leaves of *Rhododendron maximum.*

734. CHEIROSPORA, Fr.

2075. **C. botryospora,** Fr. Reg. Rep. 25, p. 88.
Dead branches.

735. MYXOSPORIUM, Lk.

2076. **M. nitidum,** B. and C. Reg. Rep. 22, p. 90.
Dead branches of *Cornus.*

736. PESTALOZZIA, DeNot.

2077. **P. Guepini,** Desm.
Leaves of *Camellia Japonica.*

2078. **P. Mariæ,** Clinton. Reg. Rep. 27, p. 102.
Leaves of *Rhododendron maximum.*

2079. **P. monochæta,** Desm. (*P. Peckii,* Clinton.) Reg. Rep. 28, p. 59.
Dead and persistent oak leaves.

737. TORULA. Cd.

2080. **T. alnea,** Pk. Reg. Rep. 25, p. 89.
Dead trunks of *Alnus incana.*

738. TRIMMATOSTROMA, Cd.

2081. **T. Americanum,** Thum. (*Coniothecium toruloideum,* B. and C.) Reg. Rep. 23, p. 55.
Dead willow branches.

739. SEPTONEMA, Cd.

2082. **S. spilomeum,** Berk. Reg. Rep. 22, p. 91.
Old rails and decaying wood.

2083. **S. dichænoides,** P. & C. Reg. Rep. 30, p. 53.
Bark of alder.

740. BACTRIDIUM, Kze.

2084. **B. flavum,** Kze. Reg. Rep. 26, p. 77.
Wet decaying wood.

741. SPORIDESMIUM, Lk.

2085. **S. concinnum,** B. & C. Reg. Rep. 27, p. 103: ibid, 29, p. 50.
Decaying wood.

2086. **S. moriforme,** Pk. Reg. Rep. 25, p. 89.
Decaying wood of apple trees.

2087. **S. lepraria,** B. & Br. Reg. Rep. 28, p. 60.
Decaying wood.

742. PHRAGMIDIUM, Lk.

2088. **P. obtusum,** K. & S. (*Aregma obtusatum*, Fr.) Reg. Rep. 24, p. 90.
Living leaves of *Potentilla Canadensis.*

2089. **P. Rosarum,** Rabh. (*Aregma mucronatum*, Fr.) Reg. Rep. 23, p. 55.
Living leaves of Roses.

2090. **P. gracile,** Grev. Reg. Rep. 29, p. 50.
Living leaves of *Rubus odoratus.*

743. TRIPHYRAGMIUM, Lk.

2091. **T. clavellosum,** Berk. Reg. Rep. 23, p. 55.
Living leaves of *Aralia nudicaulis.*

744. PUCCINIA, Pers.

2092. **P. solida,** Schw. Reg. Rep. 22, p. 91 : ibid. 25, p. 118.
Living leaves of *Anemone cylindrica.*

2093. **P. fusca,** Schrot. (*P. Anemones*, Pers.) Reg. Rep. 23, p. 56 : ibid. 25, p. 116.
Living leaves of *Anemone nemorosa.*

2094. **P. Calthæ,** Lk. Reg. Rep. 29, p. 50.
Living leaves of *Caltha palustris.*

2095. **P. aculeata,** Schw. Reg. Rep. 22, p. 91 : ibid. 25, p. 113.
Living leaves of *Podophyllum peltatum.*

2096. **P. Violarum,** Lk. Reg. Rep. 23, p. 56 : ibid. 25, p. 112.
Living leaves of violets.

2097. **P. Lychnidearum,** Lk. Reg. Rep. 25, p. 110.
Living leaves of *Dianthus barbatus.*

2098. **P. Mariæ-Wilsoni,** Clinton. Reg. Rep. 25, p. 114.
Living leaves of *Claytonia Caroliniana* and *C. Virginica.*

2099. **P. Noli-tangeris,** Cd. Reg. Rep. 24, p. 90 : ibid. 25, p. 114.
Living leaves of *Impatiens* and *Dalibarda.*

2100. **P. Pyrolæ,** Cke. Reg. Rep. 24, p. 90 : ibid. 25, p. 119.
Living leaves of *Polygala paucifolia.*

2101. **P. Prunorum,** Lk. Reg. Rep. 25, p. 116.
Living leaves of *Prunus serotina.*

2102. **P. Waldsteiniæ,** Curt. Reg. Rep. 22, p. 91 : ibid. 25, p. 120.
Living leaves of *Waldsteinia fragarioides.*

2103. **P. spreta,** Pk. Reg. Rep. 29, p. 67. (*P. Tiarella,* B. and C. Reg. Rep. 25, p. 115.)
Living leaves of *Tiarella cordifolia* and *Mitella nuda.*

2104. **P. Circææ,** Pers. Reg. Rep. 23, p. 56 : ibid. 25, p. 118.
Living leaves of *Circæa Lutetiana.*

2105. **P. obtegens,** Tul. (*P. Compositarum,* Sch.) Reg. Rep. 23, p. 56 : ibid. 25, p. 113. (*Trichobasis suaveolens,* Pers.) Reg. Rep. 24, p. 89.
Living leaves of *Cirsium arvense.*

2106. **P. Cirsii,** Lasch.
Living leaves of *Cirsium lanceolatum.*

2107. **P. Galiorum,** Lk. Reg. Rep. 24, p. 90 : ibid. 25, p. 116.
Living leaves of *Galium asprellum* and *G. triflorum.*

2108. **P. Umbelliferarum,** DC. Reg. Rep. 23, p. 56 : ibid. 25, p. 112.
Living leaves of *Pimpinella integerrima.*

2109. **P. Cryptotæniæ,** Pk. Reg. Rep. 23, p. 56 : ibid. 25, p. 114
Living leaves of *Cryptotænia Canadensis.*

2110. **P. Osmorrhizæ,** C. and P. Reg. Rep. 29, p. 73. (*P. Myrrhis,* Schw. Reg. Rep. 25, p. 112, *Uredo chærophylli,* Schw. 23, p. 57.)
Living leaves of *Osmorrhiza brevistylis, etc.*

2111. **P. porphyrogenita,** Curt. Reg. Rep. 29, p. 73. (*P. acuminata,* Pk. Reg. Rep. 23, p. 57 : ibid. 75, p. 119.)
Living leaves of *Cornus Canadensis.*

2112. **P. Asteris,** Schw. Reg. Rep. 23, p. 56 : ibid. 25, p. 118.
Living leaves of asters.

2113. **P. Xanthii.** Schw. Reg. Rep. 23, p. 56 : ibid. 25, p. 117.
Living leaves of *Xanthium strumarium.*

2114. **P. Helianthi,** Schw. Reg. Rep. 23, p. 56: ibid. 25, p. 116. (*P. Helianthorum,* Schw.)
Living leaves of *Helianthus.*

2115. **P. variabilis,** Grev. Reg. Rep. 25, p. 112.
Living leaves of *Taraxacum Dens-leonis.*

2116. **P. investita,** Schw. Reg. Rep. 22, p. 91 : ibid. 25, p. 117.
Living leaves of *Gnaphalium decurrens.*

2117. **P. orbicula,** P. and C. Reg. Rep. 30, p. 53.
Living leaves of *Nabalus.*

2118. P. **Menthæ**, Pers. Reg. Rep. 25, p. 115. (*Trichobasis Labiatarum*, Lev. Reg. Rep. 24, p. 89.)
Living leaves of mints.

2119. P. **Gentianæ**, Strauss. Reg. Rep. 29, p. 50.
Living leaves of *Gentiana Andrewsii*.

2120. P. **Hydrophylli**, P. and C. Reg. Rep. 30, p. 54.
Living leaves of *Hydrophyllum Virginicum*.

2121. P. **Veratri**, Niessl. Reg. Rep. 27, p. 103.
Living leaves of *Veratrum viride*.

2122. P. **Convolvuli**, Cast. Reg. Rep. 24, p. 90 : ibid. 25, p. 120.
Living leaves of *Convolvulus Sepium*.

2123. P. **Clintonii**, Pk. Reg. Rep. 28, p. 61.
Living leaves of *Pedicularis Canadensis*.

2124. P. **Dayii**, Clinton. Reg. Rep. 28, p. 60.
Living leaves of *Lysimachia ciliata*.

2125. P. **Physostegiæ**, P. & C. Reg. Rep. 29, p. 50.
Living leaves of *Physostegia Virginiana*.

2126. P. **Amphibii**, Fekl. Reg. Rep. 30, p. 75. (*P. Polygonorum*, Lk. Reg. Rep. 24, p. 90.)
Living leaves of *Polygonum amphibium*.

2127. P. **Maydis**, Patsch. (*P. Sorghi*, Schw.) Reg. Rep. 28, p. 61.
Living leaves of *Zea Mays*.

2128. P. **angustata**, Pk. Reg. Rep. 25, p. 123.
Living leaves of *Scirpus Eriophorum*.

2129. P. **coronata**, Cd. Reg. Rep. 23, p. 56: ibid. 25, p. 121.
Living leaves of *Avena sativa*.

2130. P. **arundinacea**, Hedw. Reg. Rep. 25, p. 122. (*P. arundinaria*, Schw.)
Living leaves of *Phragmites communis*.

2131. P. **obtecta**, Pk. Reg. Rep. 25, p. 121.
Living leaves of *Scirpus validus*.

2132. P. **Ellisii**, Thum. (*P. Andropogi*, Schw.)
Living leaves of *Andropogon scoparius*.

2133. P. **caricina**, Dee. (*P. caricis*, DC.) Reg. Rep. 25, p. 122.
Living leaves of Carices.

2134. P. **striola**, Lk. Reg. Rep. 25, p. 122.
Living leaves of sedges.

2135. P. **graminis**, Pers. Reg. Rep. 25, p. 121.
Living leaves of grasses.

745. GYMNOSPORANGIUM, Lk.

2136. **G. fuscum, var. globosum,** Far. (*Podisoma fuscum*, Duby.) Reg. Rep. 25, p. 89.
Galls of *Juniperus Virginiana.*

746. USTILAGO, Lk.

2137. **U. Carbo,** Tul. Reg. Rep. 29, p. 75. (*U. segetum*, Dittm. Reg. Rep. 22, p. 92.)
Spikes of wheat.

2138. **U. Maydis,** Cd. Reg. Rep. 22, p. 92. (*U. Zeæ*, Schw.)
Flowers and fruit of *Zea Mays.*

2139. **U. utriculosa,** Tul. Reg. Rep. 22, p. 93: ibid. 27, p. 111.
Spikes of *Polygonum Pennsylvanicum.*

2140. **U. Erythronii,** Clinton. Reg. Rep. 27, p. 115.
Living leaves of *Erythronium Americanum.*

747. UROCYSTIS, Rabh.

2141. **U. pompholygodes,** Schl. Reg. Rep. 30, p. 77. (*Polycystis Ranunculacearum*, Desm. Reg. Rep. 23, p. 58.)
Living leaves of *Trollius*, *Hepatica* and *Anemone.*

748. UROMYCES, Lev.

2142. **U. Lespedezæ,** Schw. (*Puccinia Lespedezæ violaceæ*, Schw.) Reg. Rep. 22, p. 92.
Living leaves of *Lespedeza.*

2143. **U. Junci,** Schw. (*Puccinia Junci*, Schw.) Reg. Rep. 22, p. 91.
Living *Juncus effusus* and *J. tenuis.*

2144. **U. Peltandraæ,** Howe. Reg. Rep. 29, p. 67.
Living leaves of *Peltandra* and *Arisæma.*

2145. **U. pyriformis,** Cke. Reg. Rep. 26, p. 77 : ibid. 29, p. 69.
Living leaves of *Acorus Calamus.*

2146. **U. Sparganii,** C. and P. Reg. Rep. 26, p. 77.
Living leaves of *Sparganium.*

2147. **U. Euphorbiæ,** C. and P. Reg. Rep. 25, p. 90.
Living leaves of *Euphorbia maculata* and *E. hypericifolia.*

2148. **U. triquetra,** Cke. Reg. Rep. 25, p. 90. (*Puccinia Hyperici*, Schw. Reg. Rep. 22, p. 92.)
Living leaves of *Hypericum mutilum.*

2149. **U. solida,** B. and C. Reg. Rep. 24, p. 90.
Living leaves of *Desmodium.*

2150. **U. Polygoni,** Fckl. Reg. Rep. 24, p. 89.
Living stems of *Polygonum.*

2151. **U. Howei,** Pk. Reg. Rep. 30, p. 75. (*Trichobasis Howei*, Pk. Reg. Rep. 23, p. 58 ; *U. Asclepiadis*, Cke.)
Living leaves of *Asclepias Cornuti.*

2152. **U. Trifolii,** Fckl. Reg. Rep. 31, p. 43.
Living leaves of *Medicago lupulina.*

2153. **U. polymorphus,** P. and C. Reg. Rep. 31, p 43.
Living leaves of *Lathyrus ochroleucus.*

2154. **U. Lilii,** Clinton. Reg. Rep. 27, p. 103.
Living leaves of *Lilium Canadense.*

749. PILEOLARIA, Cast.

2155. **P. brevipes,** B. and C. Reg. Rep. 24, p. 90.
Living leaves of *Rhus Toxicodendron.*

750. MELAMPSORA, Cast.

2156. **M. Hartigii,** Thum. (*Uredo epitea*, Kze.) Reg. Rep. 22, p. 91.
Leaves of *Salix nigra.*

2157. **M. populina,** Lev. (*Lecythea cylindrica*, Strauss.) Reg. Rep. 23, p. 58.
Leaves of *Populus.*

751. COLEOSPORIUM, Lev.

2158. **C. ochraceum,** Bon. Reg. Rep. 29, p. 51 (*Uredo Agrimoniæ*, Schw.)
Living leaves of *Agrimonia Eupatoria.*

2159. **C. miniatum,** Bon. (*Uredo effusa*, Strauss, Reg. Rep. 22, p. 92. *U. miniata*, Pers.)
Living leaves and stems of roses.

752. UREDO, Pers.

2160. **U. pustulata,** Pers. Reg. Rep. 23, p. 57
Living leaves of *Epilobium.*

2161. **U. luminata,** Schw. Reg. Rep. 22, p. 92. (*Æcidium luminatum*, Schw.)
Living leaves of *Rubus.*

2162. **U. Peckii,** Thum. (*U. æcidioides*, Pk.) Reg. Rep. 24, p. 88.
Living leaves and stems of *Amphicarpea monoica.*

2163. **U. Solidaginis,** Schw. Reg. Rep. 22, p. 91.
Living leaves and stems of *Solidago* and *Aster.*

2164. **U. Helianthi**, Schw. Reg. Rep. 24, p. 88.
Living leaves and stems of *Helianthus*.

2165. **U. Smilacis**, Schw. Reg. Rep. 27, p. 104.
Living leaves and stems of *Lilium Canadense*.

2166. **U. Cassandræ**, P. and C. Reg. Rep. 30, p. 54.
Living leaves and stems of *Cassandra calyculata*.

2167. **U. pyrolata**, Kornk. (*Uredo Pyrolæ*, Strauss. Reg. Rep. 22, p. 92.)
Æcidium pyrolatum, Schw.)
Living leaves and stems of *Pyrola rotundifolia*.

753. PROTOMYCES, Ung.

2168. **P. Menyanthis**, DeBy. Reg. Rep. 28, p. 61.
Leaves of *Menyanthes trifoliata*.

754. CRONARTIUM, Tul.

2169. **C. Comandræ**, Pk.
Living leaves and stems of *Comandra*.

755. GRAPHIOLA, Poit.

2170. **G. Phœnicis**, Poit. Reg. Rep. 29, p. 51.
Leaves of *Phœnix dissectifolia* in conservatories.

SUB-ORDER 4. HYPHOMYCETES.

756. CERATIUM, A. and S.

2171. **C. hydnoides**, A. and S. Reg. Rep. 26, p. 78.
Decaying wood.

757. SCORIAS, Fr.

2172. **S. spongiosa**, Fr.
Leaves and sticks under beeches and alders. This fungus occurs on whatever may chance to be moistened by the excretions of the woolly insects that infest beech and alder trees. I have seen it nowhere else. It is sometimes accompanied by some *Capnodium*, of which, I suspect, it is a condition.

758. ISARIA, Fr.

2173. **I. favinosa**, Fr.
Ground.

2174. **I. clavata**, Dittm.
Decaying wood.

759. STILBUM, Tode.

2175. **S. giganteum,** Pk. Reg. Rep. 24, p. 93.
Dead maple trunks and logs.

2176. **S. pellucidum,** Schrad. Reg. Rep. 24, p. 93.
Decaying wood.

2177. **S. smaragdinum,** A. and S. Reg. Rep. 29, p. 51.
Decaying wood.

2178. **S. Rhoidis,** B. and C. Reg. Rep. 24, p. 93.
Dead *Rhus typhina.*

2179. **S. erythrocephalum,** Dittm.
Horse dung.

760. FUSARIUM, Lk.

2180. **F. lateritium,** Nees. Reg. Rep. 25, p. 92.
Bark of *Dirca palustris.*

2181. **F. erubescens,** B and C. Reg. Rep. 24, p. 93.
Dead branches of *Tilia Americana.*

761. EPICOCCUM, Lk.

2182. **E. neglectum,** Desm. Reg. Rep. 29, p. 51.
Stems and leaves of *Zea Mays.*

762. ILLOSPORIUM, Mart.

2183. **I. roseum,** Fr. Reg. Rep. 25, p. 93.
Lichens.

2184. **I. carneum,** Fr. Reg. Rep. 23, p. 61.
On *Peltigera.*

763. ÆGERITA, Pers.

2185. **Æ. candida,** Pers. Reg. Rep. 29, p. 51.
Decaying wood.

764. SPOROCYBE, Fr.

2186. **S. byssoides,** Fr. Reg. Rep. 25, p. 93.
Dead stems of herbs.

765. TUBERCULARIA, Tode.

2187. **T. Celastri,** Schw. Reg. Rep. 26, p. 84.
Dead stems of *Celastrus scandens.*

2188. **T. subdiaphana**, Schw.
Dead stems of grape vine.

766. PERICONIA, Cd.

2189. **P. calicioides**, Fr. Reg. Rep. 22, p. 94.
Decaying wood. The name *Periconia* is applied by some authors to such species as have the stem composed of several compacted filaments, and the name *Sporacybe*, to such as have the stem formed of a single or simple filament. Other authors just reverse the application of these generic names, and therefore much confusion in their use is the result.

767. PODOSPORIUM, Schw.

2190. **P. rigidum**, Schw. Reg. Rep. 22, p. 94 : ibid. 24, p. 103.
Dead branches.

768. MACROSPORIUM, Fr.

2191. **M. Cheiranthi**, Fr. Reg. Rep. 23, p. 61.
Dead leaves and stems.

2192. **M. Sarcinula**, Berk. Reg. Rep. 30, p. 55.
Decaying squashes.

2193. **M. chartarum**, Pk. Reg. Rep. 25, p. 93.
Wall paper.

769. CLASTERISPORIUM, Schw.

2194. **C. uncinatum**, Clinton. Reg. Rep. 29, p. 50.
Fallen oak leaves.

770. HELMINTHOSPORIUM, Lk.

2195. **H. macrocarpum**, Grev. Reg. Rep. 22, p. 94.
Dead branches of oak and chestnut.

2196. **H. episphæricum**, C. and P. Reg. Rep. 29, p. 52.
Effete *Diatrype*.

2197. **H. obovatum**, Berk. (*Monotospora biseptata*, Pk. Reg. Rep. 28, p. 62).
Decaying wood.

771. CLADOSPORIUM, Lk.

2198. **C. herbarum**, Lk. Reg. Rep. 22, p. 94.
Dead stems, decaying fungi, etc.

2199. **C. epiphyllum,** Nees. Reg. Rep. 25, p 94.
Dead leaves.

2200. **C. Typhæ,** Schw. Reg. Rep. 27, p. 105.
Dead leaves of *Typha*.

2201. **C. lignicola,** Cd. Reg. Rep. 27, p. 105.
Wood.

2202. **C. depressum,** B. and Br. Reg. Rep. 30, p. 54.
Living leaves of *Archangelica atropurpurea*. In the American specimens the filaments are longer than in the typical form, but the difference scarcely seems of specific value.

772. STREPTOTHRIX, Cd.

2203. **S. atra,** B. and C. Reg. Rep. 23, p. 61.
Dead branches of *Carpinus*, etc.

773. POLYTHRINCIUM, Kze.

2204. **P. Trifolii,** Kze. Reg. Rep. 22, p. 94.
Living leaves of clover.

774. ASPERGILLUS. Mich.

2205. **A. glaucus,** Lk. Reg. Rep. 26, p. 79.
Decaying fungi.

775. PERONOSPORA, DeBy.

2206. **P. parasitica,** Pers. Reg. Rep. 26, p. 79.
Living leaves of *Cardamine rhomboidea*.

2207. **P. effusa,** Grev. Reg. Rep. 29, p. 52.
Living leaves of *Chenopodium album*.

2208. **P. Corydalis,** DeBy.
Living leaves of *Dicentra* (*Diclytra*) *Canadensis*.

776. RAMULARIA, Ung.

2209. **R. Nemopanthis,** C. and P. Reg. Rep. 29, p. 52.
Living leaves of *Nemopanthes Canadensis*.

2210. **R. obovata,** Fckl. (*Peronospora obliqua*, Cke. Reg. Rep. 28, p. 63, *Ovularia obovata*, Sacc.)
Living leaves of *Rumex crispus*.

777. CYSTOPUS, DeBy.

2211. **C. cubicus,** Str. Reg. Rep. 25, p. 91.
Living leaves of *Tragopogon* and *Ambrosia*.

2212. **C. candidus,** Lev. Reg. Rep. 22, p. 93 : ibid. 24, p. 103.
Living leaves of cruciferous plants.

2213. **C. spinulosus,** DeBy. Reg. Rep. 29, p. 51.
Living leaves of *Cirsium arvense.*

2214. **C. Portulacæ,** DC. Reg. Rep. 29, p. 51.
Living leaves of *Portulaca oleracea.*

2215. **C. Bliti,** Biv. (*C. Amaranti,* Schw. Reg. Rep. 28, p. 61.)
Living leaves of *Amarantus retroflexus.*

778. CERCOSPORA, Fres.

2216. **C. Callæ,** P. and C. Reg. Rep. 29, p. 52.
Living leaves of *Calla palustris.*

779. HELICOSPORIUM, Nees.

2217. **H. ellipticum,** Pk. Reg. Rep. 27, p. 103.
Decaying hemlock wood.

780. TRICHODERMA, Pers.

2218. **T. viride,** Pers. Reg. Rep. 30, p. 87.
Decaying wood.

781. VERTICILLIUM, Nees.

2219. **V. pulvereum,** P. and C. Reg. Rep. 30, p. 56.
Decaying wood.

2220. **V. lateritium,** Ehrh.
Decaying wood.

782. POLYACTIS, Lk.

2221. **P. fascicularis,** Cd. Reg. Rep. 26, p. 79.
Dead stems of herbs.

2222. **P. cana,** Berk. Reg. Rep. 30, p. 57.
Dead stems and leaves.

783. SEPEDONIUM, Lk.

2223. **S. chrysospermum,** Lk. Reg. Rep. 24. p. 94.
Decaying *Boleti.*

784. FUSISPORIUM, Lk.

2224. **F. Buxi,** Fr. Reg. Rep. 23, p. 61.
Dead leaves of *Buxus sempervirens.*

2225. **F. rimosum**, Pk. Reg. Rep. 30, p. 58.
Cut surface of corn stalks.

785. PILACRE, Fr.

2226. **P. faginea,** B. and Br. Reg. Rep. 26, p. 79.
Decaying beech wood.

SUB-ORDER 5. PHYSOMYCETES.

786. MUCOR, Mich.

2227. **M. inæqualis,** Pk. Reg. Rep. 26, p. 79.
Decaying squashes and pumpkins.

2228. **M. stolonifer,** Ehrh. (*Ascophora Mucedo*, Tode. Reg. Rep. 25, p. 94.)
Decaying vegetable substances.

787. PILOBOLUS, Tode.

2229. **P. crystallinus,** Tode. Reg. Rep. 27, p. 106.
Horse dung.

788. EMPUSA, Cohn.

2230. **E. Muscæ,** Cohn. (*Sporendonema Muscæ*, Fr.)
Dead flies, (*Muscæ domesticæ.*)

SUB-ORDER 6. ASCOMYCETES.

789. ONYGENA, Pers.

2231. **O. equina,** Pers. Reg. Rep. 25, p. 94.
Old hoofs and horns.

790. SPHÆROTHECA, Lev.

2232. **S. Castagnei,** Lev. Reg. Rep. 25, p. 94.
Living leaves of various plants.

791. PHYLLACTINIA, Lev.

2233. **P. suffulta,** Reb. (*P. guttata*, Lev., Reg. Rep. 29, p. 79.)
Living leaves of various trees and shrubs, rarely on herbs.

792. UNCINULA, Lev.

2234. **U. adunca**, Lev. Reg. Rep. 23, p. 65.
Living leaves of willows.

2235. **U. macrospora,** Pk. Reg. Rep. 25, p. 96.
Living leaves of elm.

2236. **U. flexuosa,** Pk. Reg. Rep. 26, p. 80.
Living leaves of horse-chestnut.

2237. **U. Clintonii,** Pk. Reg. Rep. 25, p. 96.
Living leaves of basswood.

2238. **U. circinata,** C. and P. Reg. Rep. 25, p. 96.
Living leaves of maple.

2239. **U. Ampelopsidis,** Pk. (*U. subfusca,* B. and C.) Reg. Rep. 26, p. 80.
Living leaves of Virginia creeper.

2240. **U. spiralis,** B. and C. (*U. Americana,* Howe.) Reg. Rep. 26, p. 80.
Living leaves of grape vines.

793. PODOSPHÆRIA, Kze.

2241. **P. Kunzei,** Lev. (*P. Cerasi,* Lev., Reg. Rep. 24, p. 100.)
Living leaves of cherry and thorn.

794. MICROSPHÆRIA, Lev.

2242. **M. Hedwigii,** Lev. Reg. Rep. 25, p. 95.
Living leaves of *Viburnum. Erysiphe Viburni,* Schw., is probably the same species.

2243. **M. Van Bruntiana,** Ger. Reg. Rep. 28, p. 64.
Living leaves of *Sambucus Canadensis.* I have never been able to find more than four spores in an ascus in this fungus, and it is doubtful whether this form is specifically distinct from *M. Hedwigii,* although the tips of the appendages are generally more fully developed and have more numerous bifurcations than in that species.

2244. **M. penicillata,** Lev. Reg. Rep. 22, p. 100.
Living leaves of beech, birch and hazel.

2245. **M. Friesii,** Lev. Reg. Rep. 23, p. 65.
Living leaves of lilac.

2246. **M. Russellii,** Clinton. Reg. Rep. 26, p. 80.
Living leaves of *Oxalis stricta.*

2247. **M. abbreviata,** Pk. Reg. Rep. 28, p. 64.
Dead oak leaves.

2248. **M. densissima,** Schw. Reg. Rep. 26, p. 80.
Dead oak leaves.

2249. **M. Dubyi,** Lev. Reg. Rep. 26, p. 80.
Living leaves of *Lonicera.*

2250. **M. holosericea**, Lev. Reg. Rep. 25, p. 95.
Living leaves of *Astragalus Cooperi*.

2251. **M. Vaccinii**, C. and P. Reg. Rep. 23, p. 65.
Living leaves of *Vaccinium*.

2252. **M. extensa**, C. and P. Reg. Rep. 25, p. 95.
Living leaves of *Quercus*.

2253. **M. diffusa**, C. and P. Reg. Rep. 25, p. 95.
Living leaves of *Desmodium*.

795. ERYSIPHE, Hedw.

2254. **E. lamprocarpa**, Lev. Reg. Rep. 23, p, 65.
Living leaves of various plants.

2255. **E. Martii**, Lk. Reg. Rep. 25, p. 96.
Living leaves of *Leguminosæ*.

2256. **E. communis**, Schl. Reg. Rep. 22, p. 101.
Living leaves of *Ranunculaceæ*.

796. MORCHELLA, Dill.

2257. **M. esculenta**, Pers. Reg. Rep. 22, p. 44 : ibid. 28, p. 86.
Under evergreen trees.

2258. **M. semilibera**, DC. Reg. Rep. 30, p. 58.
Open woods.

797. GYROMITRA, Fr.

2259. **G. curtipes**, Fr.
Borders of woods.

798. HELVELLA, L.

2260. **H. crispa**, Fr. Reg. Rep. 24, p. 94.
Woods.

2261. **H. gracilis**, Pk. Reg. Rep. 24, p. 94.
Wet mossy places.

799. VERPA, Swartz.

2262. **V. digitaliformis**, Pers. Reg. Rep. 30, p. 59.
Open woods.

800. MITRULA, Fr.

2263. **M. paludosa**, Fr. Reg. Rep. 23, p. 62.
Sticks and leaves in wet places.

801. SPATHULARIA, Pers.

2264. **S. flavida,** Pers. Reg. Rep. 22, p. 87: ibid. 28, p. 87.
Woods.

802. LEOTIA, Hill.

2265. **L. lubrica,** Pers. Reg. Rep. 23, p. 62.
Thin woods.

803. CUDONIA, Fr.

2266. **C. lutea,** Pk. (*Vibrissea lutea*, Pk. Reg. Rep. 25, p. 97.)
Dense woods.

804. GEOGLOSSUM, Pers.

2267. **G. luteum,** Pk. (*Mitrula lutescens*, B. & C.) Reg. Rep. 24, p. 94.
Mossy places in woods.

2268. **G. Peckianum,** Cke. Reg. Rep. 28, p. 87. (*G. viscosum*, Pers. Reg. Rep. 25, p. 97.)
Swampy woods.

2269. **G. velutipes,** Pk. Reg. Rep. 28, p. 65.
Woods.

805. PEZIZA, L.

§ 1. *MACROPODES.*

2270. **P. Macropus,** Pers. Reg. Rep. 22, p. 94.
Woods and open places.

2271. **P. hesperidea,** C. and P. Reg. Rep. 26, p. 80.
Woods and on buried sticks.

2272. **P. Warnei,** Pk. (*Rhizina Helvetica*, Fckl.) Reg. Rep. 30, p. 59.
Decaying hemlock wood.

§ 2. *COCHLEATÆ.*

2273. **P. badia,** Pers. Reg. Rep. 25, p. 98.
Damp ground and shaded banks.

2274. **P. cochleata,** Huds. Reg. Rep. 23, p. 62.
Ground in stoves.

2275. **P. aurantia,** Vahl. Reg, Rep. 23, p. 62: ibid. 24, p. 103.
Ground.

§ 3. *CUPULARES.*

2276. **P. repanda,** Wahl. Reg. Rep. 28, p. 65.
Ground and mossy trunks.

2277. **P. pallidula,** C. and P. Reg. Rep. 28, p. 65.
Decaying wood.

§ 4. *HUMARIA.*

2278. **P. adusta,** C. and P. Reg. Rep. 27, p. 107.
Burnt ground.

2279. **P. omphalodes,** Bull. Reg. Rep. 28, p. 65.
Burnt ground.

§ 5. *SARCOSCYPHÆ.*

2280. **P. coccinea,** Jacq. Reg. Rep. 23, p. 62.
Half buried sticks.

2281. **P. scutellata,** L. Reg. Rep. 22, p. 94.
Soft decaying wood and wet ground.

2282. **P. erinaceus,** Schw. Reg. Rep. 24, p. 95.
Decaying wood.

2283. **P. hemispherica,** Wigg. Reg. Rep. 24, p. 95.
Decaying wood and mossy ground.

2284. **P. theleboloides,** A. and S. Reg. Rep. 26, p. 81.
Spent hops in a stove.

2285. **P. stercorea,** Pers. Reg. Rep. 25 p. 98.
Cow dung.

2286. **P. allospadicea,** Grev. Reg. Rep. 29, p. 54.
Mossy ground.

2287. **P. floccosa,** Schw. Reg. Rep. 23, p. 62.
Decaying wood and sticks.

§ 6. *DASYSCYPHÆ.*

2288. **P. calycina,** Schw. Reg. Rep. 22, p. 94.
Bark of acerose trees.

2289. **P. Agassizii,** B. and C. Reg. Rep. 22, p. 95.
Bark of *Abies balsamea.*

2290. **P. subochracea,** C. and P. Reg. Rep. 26 p. 81.
Dead *Rubus odoratus.*

2291. **P. nivea,** Fr. Reg. Rep. 25, p. 99.
Decaying oak.

2292. **P. virginea,** Batsch. Reg. Rep. 23, p. 62.
Decaying wood and stems.

2293. **P. vulpina,** Cke. Reg. Rep. 30, p. 60.
Decaying wood.

2294. **P. maculincola,** Schw. Reg. Rep. 30, p. 60.
Decaying wood. Some authors regard this as identical with *P. flammea*, A. and S., but as the specimens in the Schweinitzian Herbarium indicate some differences I have not united the two forms.

2295. **P. hyalina,** Pers. Reg. Rep. 28, p. 66.
Decaying wood.

2296. **P. translucida,** B. and C. Reg. Rep. 22, p. 95.
Decaying wood.

2297. **P. Tiliæ,** Pk. Reg. Rep. 24, p. 96.
Dead branches of basswood.

§ 7. *TAPESIA.*

2298. **P. sanguinea,** Pers. (*Patellaria sanguinea*, Karst.)
Decaying wood.

§ 8. *HYMENOSCYPHÆ.*

2299. **P. Persoonii,** Mong. Reg. Rep. 24, p. 96. (*Stamnaria Persooni*, Fckl.)
Dead stems of *Equisetum hiemale.*

2300. **P. cyathoidea,** Bull. Reg. Rep. 22, p. 95.
Dead herb stems.

2301. **P. albumina,** C. and P. Reg. Rep. 26, p. 81.
Decaying wood and stems.

§ 9. *DURELLA.*

2302. **P. macrospora,** Fckl. Reg. Rep. 30, p. 61. (*D. compressa*, A. and S. Reg. Rep. 22, p. 95.)
Decaying wood.

2303. **P. flexella,** Fr. Reg. Rep. 22, p. 95.
Decaying wood. This is referred to lichens by some authors.

§ 10. *MOLLISIA.*

2304. **P. vinosa,** A. and S. Reg. Rep. 24, p. 95.
Decaying wood.

2305. **P. cinerea,** Batsch. Reg. Rep. 28, p. 86.
Decaying wood.

2306. **P. assimilis,** C. and P. Reg. Rep. 26, p. 81.
Dead herb stems.

2307. **P. planodisca,** P. and C. Reg. Rep. 31, p. 46.
Dead Stems of *Andropogon.*

2308. **P. Dehnii,** Rabh. Reg. Rep. 26, p. 81.
Living stems of *Potentilla argentea.*

2309. **P. Sphærella,** P. and C.
Dead stems of *Trifolium pratense.*

806. HELOTIUM, Fr.

2310. **H. aciculare,** Fr. Reg. Rep. 27, p. 107.
Half buried wood.

2311. **H. æruginosum,** Fr. (*Peziza æruginosa,* Fr. Reg. Rep. 24, p. 95.)
Decaying wood. This species and the next are by some deemed generically distinct, and referred to a genus *Chlorosplenium.*

2312. **H. versiforme,** Fr. (*Craterellus cæspitosus,* Pk. Reg. Rep. 25, p. 82.)
Decaying wood.

2313. **H. rugipes,** Pk. Reg. Rep. 26, p. 82.
Decaying wood.

2314. **H. citrinum,** Fr. Reg. Rep. 22, p. 95.
Decaying wood.

2315. **H. salicellum,** Fr. Reg. Rep. 28, p. 67.
Dead willow twigs.

2316. **H. Herbarum,** Fr. (*Peziza Herbarum,* Fr. Reg. Rep. 22, p. 95.)
Dead stems.

2317. **H. epiphyllum,** Fr. Reg. Rep. 25, p. 98.
Fallen leaves.

2318. **H. Sarmentorum,** De Not.
Dead grape vines.

807. DERMATEA, Fr.

2319. **D. fascicularis,** A. and S. (*Peziza fascicularis,* Fr. Reg. Rep. 22, p. 96.)
Dead poplar trunks and branches.

2320. **D. furfuracea,** Fr. Reg. Rep. 24, p. 96.
Dead alders.

2321. **D. carpinea,** Fr. Reg. Rep. 30, p. 62. (*Patellaria carpinea,* Berk.)
Dead trunks of *Carpinus.*

2322. **D. acericola,** Pk. (*Nodularia acericola,* Pk. Reg. Rep. 25 p. 98.)
Dead *Acer spicatum.*

808. PATELLARIA, Fr.

2323. **P. atrata,** Fr. Reg. Rep. 24, p. 96.
Decaying wood.

2324. **P. indigotica,** C. and P. Reg. Rep. 25, p. 98.
Decaying wood.

2325. **P. fusispora,** C. and P. Reg. Rep. 28, p. 67.
Decaying wood.

2326. **P. lignyota,** Fr. Reg. Rep. 30, p. 62.
Decaying wood.

2327. **P. leptospermum,** Pk. Reg. Rep. 30, p. 62.
Decaying wood of maple.

2328. **P. rhabarbarinum,** Berk. Reg. Rep. 22, p. 96.
Dead stems of *Rubus villosus.*

809 SPHINCTRINA, Fr.

2329. **S. turbinata,** Fr. Reg. Rep. 22, p. 95.
On lichens.

2330. **S. tigillaris,** B. and Br. Reg. Rep. 28, p. 68.
On *Polyporus pergamenus* and *P. abietinus.*

2331. **S. gummæ,** B. and M. (*S. Cerasi,* B. and C. Reg. Rep. 24, p. 97.)
On gum of cherry.

810. TYMPANIS, Tode.

2332. **T. alnea,** Pers. Reg. Rep. 24, p. 97.
Dead alders.

2333. **T. Fraxini,** Schw. Reg. Rep. 27, p. 108.
Dead branches of ash.

2334. **T. gyrosa,** B. and C. Reg. Rep. 29, p. 56.
Dead branches of apple.

2335. **T. turbinata,** Schw. Reg. Rep. 30, p. 62.
Dead *Diervilla trifida.*

811. URNULA, Fr.

2336. **U. Craterium,** Schw. Reg. Rep. 22, p. 96. (*Peziza Craterium,* Schw., *Cenangium Craterium,* Fr., *Dermea Craterium,* Schw.)
Half buried sticks.

812. CENANGIUM, Fr.

2337. **C. Cerasi,** Fr. Reg. Rep. 24, p. 97.
Dead cherry.

2338. **C. Prunastri,** Fr. Reg. Rep. 24, p. 97.
Dead cherry.

2339. **C. Aucupariæ,** Fr. Reg. Rep. 28, p. 68.
Dead branches of *Amelanchier.*

2340. **C. Pinastri,** Fr. Reg. Rep. 22, p. 96.
Dead branches of pine.

2341. **C. seriatum,** Fr. Reg. Rep. 22, p. 96.
Dead birch.

2342. **C. populinum,** Schw. Reg. Rep. 22, p. 96.
Dead poplar.

2343. **C. triangulare,** Schw. Reg. Rep. 24, p. 97.
Dead oak.

2344. **C. Viburni,** Schw.
Dead *Viburnum lantanoides.*

813. ASCOBOLUS, Tode.

2345. **A. furfuraceus.** Pers. Reg. Rep. 29, p. 56.
Cow dung.

2346. **A. ciliatus,** Schm. Reg. Rep. 29, p. 56.
Cow dung.

814. ANGELINA, Fr.

2347. **A. rufescens,** Duby. (*Ascobolus conglomeratus*, Schw. Reg. Rep. 22, p. 95.)
Decaying chestnut and oak.

815. BULGARIA, Fr.

2348. **B. inquinans,** Pers. Reg. Rep. 22, p. 95.
Dead oak.

2349. **B. rufa,** Schw. Reg. Rep. 23, p. 62.
Ground or buried sticks.

2350. **B. sarcoides,** Fr. Reg. Rep. 22, p. 95.
Decaying wood.

2351. **B. purpurea,** Fckl. Reg. Rep. 29, p. 56. (*Coryne purpurea*, Fckl.)
Decaying wood.

816. STICTIS, Pers.

2352. **S. radiata,** Pers. Reg. Rep. 25, p. 99.
Dead bark.

2353. **S. Pupula,** Fr. Reg. Rep. 28, p. 69.
Dead poplar.

2354. **S. versicolor,** Fr. Reg. Rep. 29, p. 56.
Decaying wood.

2355. **S. hysterina,** Fr. Reg. Rep. 28, p. 69.
Dry pine branches.

817. PHACIDIUM, Fr.

2356. **P. Pini,** Fr. (*P. crustaceum*, B. and C. Reg. Rep. 22, p. 97. *Xyloma Pini*, A. and S.)
Dead pine branches. Our specimens apparently belong to the form noticed in Elenchus II, p. 136, in which the perithecia have a cinereous hue by reason of the covering epidermis.

818. RHYTISMA, Fr.

2357. **R. salicinum,** Fr. Reg. Rep. 22, p. 97.
Living leaves of willows.

2358. **R. acerinum,** Fr. Reg. Rep. 22, p. 96.
Living leaves of maple.

2359. **R. punctatum,** Fr. Reg. Rep. 22, p. 96.
Living leaves of maple. This is thought by some to be a form of the preceding species.

2360. **R. Prini,** Schw. Reg. Rep. 22, p. 96.
Living leaves of *Ilex verticillata.*

2361. **R. Canadensis,** Schw. Reg. Rep. 25, p. 100.
Living leaves of *Nemopanthes Canadensis.* Name simplified from *R. Ilicis-Canadensis. R. Asteris*, Schw., and *R. Solidaginis*, Schw., have never been found fertile, and are, in my opinion, simply insect galls.

2362. **R. Andromedæ,** Fr. Reg. Rep. 25, p. 100.
Living leaves of *Andromeda polifolia.*

819. GLONIUM, Muhl.

2363. **G. stellatum,** Muhl. Reg. Rep. 23, p. 63.
Decaying wood.

2364. **G. parvulum,** Ger. Reg. Rep. 30, p. 63. (*G. medium*, Cke.)
Decaying wood.

2365. **G. lineare,** Fr. (*Hysterium lineare*, Fr. Reg. Rep. 22, p. 97.)
Decaying wood.

820. HYSTERIUM, Tode.

2366. **H. pulicare,** Pers. Reg. Rep. 24, p. 97.
Decaying wood. *H. betulignum*, Schw., is not specifically distinct from *H. pulicare.*

2367. **H. truncatulum,** C. and P. Reg. Rep. 30, p. 63.
Decaying wood.

2368. **H. Rousselii,** De Not. Reg. Rep. 28, p. 69.
Decaying wood.

2369. **H. tortile,** Schw. Reg. Rep. 25, p. 100.
Dead wood and bark of *Thuja occidentalis.*

2370. **H. insidens,** Schw.
Decaying wood.

821. HYSTEROGRAPHIUM, Cd.

2371. **H. Fraxini,** Pers. (*Hysterium Fraxini*, Pers. Reg. Rep. 23, p. 63.
Dead branches of ash.

822. TRIBLIDIUM, Reb.

2372. **T. hiascens,** B. and C. (*Hysterium hiascens*, B. and C. Reg. Rep. 22 p. 97.)
Bark of *Quercus alba.*

823. HYPODERMA, DC.

2373. **H. Virgultorum,** DC. Reg. Rep. 24, p. 97.
Dead twigs. This and the four following species were formerly placed under the genus *Hysterium.*

2374. **H. Rubi,** Pers. Reg. Rep. 23, p. 63.
Dead twigs of *Rubus villosus.*

2375. **H. commune,** Fr. Reg. Rep. 25, p. 100.
Dead stems of herbs.

824. LOPHODERMIUM, Chev.

2376. **L. Pinastri,** Schrad. Reg. Rep. 22, p. 97.
Fallen pine Leaves.

2377. **L. Rhododendri,** Schw. Reg. Rep. 27, p. 108.
Leaves of *Rhododendron maximum.*

825. COLPOMA, Wallr.

2378. **C. juniperinum,** C. and P. Reg. Rep. 26, p. 84 : ibid. 29, p. 63,
Bark of *Juniperus Virginiana.*

826. TORRUBIA, Lev.

2379. **T. ophioglossoides,** Tul. Reg. Rep. 25, p. 100.
Buried larvæ.

2380. **T. militaris,** L. (*Cordyceps militaris*, Fr. Reg. Rep. 23, p. 63.)
Buried larvæ.

827. EPICHLOE, Fr.

2381. **E. typhina,** Berk. Reg. Rep. 28, p. 71.
Living stems of grasses and carices.

828. HYPOCREA. Fr.

2382. **H. gelatinosa,** Tode. Reg. Rep. 25, p. 100.
Decaying wood.

2383. **H. citrina,** Pers. Reg. Rep. 22, p. 97.
Old *Polypori*, etc.

2384. **H. alutacea,** Pers. Reg. Rep. 26, p. 84.
Apparently parasitic on *Spathularia*.

2385. **H. Richardsonii,** B. and M. Reg. Rep, 22, p. 97 : ibid. 24, p. 103.
Dead poplar.

2386. **H. contorta,** Schw. Reg. Rep. 26, p. 84.
Decaying wood.

2387. **H. chromosperma**, C. and P. Reg. Rep. 29, p. 56.
Decaying wood.

2388. **H. Patella,** C. & P. Reg. Rep. 29. p. 57.
Decaying wood.

829. HYPOMYCES, Tul.

2389. **H. Lactifluorum**, Schw. (*Hypocrea Lactifluorum*, Schw. Reg. Rep. 22, p. 97.)
Parasitic on fungi.

2390. **H. aurantius,** Pers. Reg. Rep. 27, p. 108.
Decaying fungi.

830. CHILONECTRIA, Sacc.

2391. **C. Rosellinii,** Carest. (*Nectria balsamea*, C. and P. Reg. Rep. 26, p. 84.)
Dead bark of *Abies balsamea*.

2392. **C. callista,** B. and C. (*Sphæria callista*, B. and C. Reg. Rep. 28, p. 77.)
Dead bark of *Cornus alternifolia*. This is *Sphæria callista*, B. and C., in Ravenal's Fung. Car. Exsic. Fasc. V. No. 67, and *Cucurbitaria callista*, B. and C., in Grevillea, Vol. IV, p. 47. Both in the Ravenelian specimens and in the New York specimens, the asci are polysporous, and I have therefore referred the species to the genus *Chilonectria*.

2393. **C. oötheca,** B. and C. *Sphæria ootheca*, B. and C. Reg. Rep. 24, p. 99.)
Decaying wood.

831. NECTRIA. Fr.

2394. **N. cinnabarina,** Tode. Reg. Rep. 22, p. 98.
Dead trunks and branches.

2395. **N. cucurbitula,** Fr. Reg. Rep. 22, p. 99.
Dead branches of *Rhamnus.*

2396. **N. inaurata,** B. and Br. Reg. Rep. 24, p. 98.
Dead stems of *Celastrus*, *Rhus*, etc.

2397. **N. coccinea,** Pers. Reg. Rep. 26, p. 84.
Dead *Alnus*, *Carpinus*, etc.

2398. **N. episphæria,** Tode. Reg. Rep. 27, p. 108.
Old sphæriaceous fungi.

2399. **N. Celastri,** Schw. Reg. Rep. 26, p. 84.
Dead *Celastrus scandens.*

2400. **N. Ribis,** Tode. Reg. Rep. 26, p. 84.
Dead stems of *Ribes rubrum,*

2401. **N. Peziza,** Tode. Reg Rep. 24, p. 98.
Decaying wood.

832. GIBBERA, Fr.

2402. **G. pulicaris,** Fr. (*Nectria pulicaris*, Fr. Reg. Rep. 30, p. 76.)
Old corn stalks.

833. MELANOSPORA, Cd.

2403. **M. lagenaria,** Pers. (*Sphæria lagenaria*, Pers. Reg. Rep. 27, p. 110.
Old *Polypori.*

834. XYLARIA, Fr.

2404. **X. polymorpha,** Grev. Reg. Rep. 22, p. 97.
Decaying wood.

2405. **X. grandis,** Pk. Reg. Rep. 26, p. 85.
Decaying wood.

2406. **X. corniformis,** Fr. Reg. Rep. 24. p. 97.
Decaying wood.

2407. **X. acuta,** Pk. Reg. Rep. 25, p. 101.
Decaying wood.

2408. **X. digitata,** Grev. Reg. Rep. 24, p. 97.
Decaying wood.

2409. **X. Hypoxylon,** Grev. Reg. Rep. 22, p. 97.
Decaying wood.

835. HYPOXYLON, Fr.

2410. **H. concentricum,** Bolt. Reg. Rep. 24, p. 97.
Decaying wood. This is *Daldinia concentrica* of some authors. *Hypoxylon vernicosum*, Schw., is a mere form of this species.

2411. **H. coccineum,** Bull. (*H. fragiforme,* Pers. Reg. Rep. 22, p. 98.)
Decaying wood.

2412. **H. Howeanum,** Pk. Reg. Rep. 24, p. 98.
Decaying wood.

2413. **H. fuscum,** Pers. Reg. Rep. 22, p. 97.
Decaying wood.

2414. **H. cohærens,** Pers. Reg. Rep. 22, p. 98.
Decaying wood of beech.

2415. **H. Morseii,** B. and C. Reg. Rep. 24, p. 98.
Decaying wood of alder.

2416. **H. Blakeii,** B. and C.
Decaying wood of willow.

2417. **H. serpens,** Pers. Reg. Rep. 22, p. 98.
Decaying wood.

2418. **H. perforatum,** Schw. Reg. Rep. 24, p. 98.
Decaying wood.

2419. **H. multiforme,** Fr. Reg. Rep. 22, p. 98.
Decaying wood and bark.

2420. **H. suborbiculare,** Pk. Reg. Rep. 30, p. 63.
Decaying wood of black ash. This is *Diatrype cercidicola,* B. and C. Report 25, p. 100.

2421. **H. fuscopurpureum,** Schw. Reg. Rep. 28, p. 71.
Decaying wood.

2422. **H. atropurpureum,** Fr.
Decaying wood of *Tilia Americana.*

836. NUMMULARIA, Tul.

2423. **N. Bulliardi,** Tul. (*Hypoxylon clypeus,* Schw. *H. nummularia,* Bull. Reg. Rep. 22, p. 98.)
Dead trunks and branches of oak and maple.

837. EUTYPA, Tul.

2424. **E. spinosa,** Pers. (*Sphæria limaformis,* Schw. Reg. Rep. 22, p. 97.)
Decaying wood.

2425. **E. lata,** Pers. Reg. Rep. 25, p. 102.
Decaying wood.

838. MELOGRAMMA, Fr.

2426. **M. Bulliardi,** Tul. Reg. Rep. 28, p. 71.
Bark of *Carpinus.*

2427. **M. superficialis,** P. and C. Reg. Rep. 29, p. 57.
Living bark of mountain ash.

2428. **M. fuliginosa,** M. and N. (*M. Quercuum*, Schw. Reg. Rep. 23. p. 63.)
Dead branches of oak, etc.

2429. **M. gyrosa,** Schw. (*Sphæria gyrosa*, Schw. Reg. Rep. 24, p, 99, *Endothia gyrosa*, Fckl.)
Decaying wood of beech.

839. DOTHIDEA, Fr.

2430. **D. Sambuci,** Pers. Reg. Rep. 24, p. 99.
Dead stems of *Sambucus Canadensis.*

2431. **D. Ribesia,** Pers. Reg. Rep. 24, p. 99.
Dead stems of *Ribes rubrum.*

2432. **D. Linderæ,** Ger. Reg. Rep. 28, p. 71.
Dead branches of *Lindera Benzoin.*

2433. **D. vimincola,** Schw. Reg. Rep. 30. p. 64. (*Hysterium vimincola*, Schw.)
Dead branches of *Diervilla trifida.*

2434. **D. clavispora,** C. and P. Reg. Rep. 30, p. 76. (*Hysterium clavisporum*, C. and P. Reg. Rep. 28, p. 69.)
Dead stems of *Phragmites communis.*

2435. **D. Osmundæ,** P. and C. Reg. Rep. 30, p. 64.
Dead stems of *Osmunda regalis.*

840. PHYLLACHORA, Nke,

2436. **P. Potentillæ,** Schw. Reg. Rep. 22, p. 100.
Leaves of *Potentilla Canadensis.* This and the three following species were formerly referred to the genus *Sphæria.*

2437. **P. perisporioides,** B. and C. Reg. Rep. 28, p. 80.
Leaves of *Desmodium Canadense.*

2438. **P. graminis,** Pers. Reg. Rep. 23, p. 64.
Leaves of grasses.

2439. **P. Ulmi,** Sow. (*Sphæria Ulmea*, Schw. Reg. Rep. 22, p. 99.)
Leaves of elms.

2440. **P. Trifolii,** Pers. Reg. Rep. 25, p. 102.
Leaves of *Trifolium pratense.*

841. DIATRYPE, Fr.

2441. **D. stigma,** Hoffm. Reg. Rep. 22, p. 98.
Dead trunks and branches.

2442. **D. disciformis,** Fr. Reg. Rep. 22, p. 98.
Dead trunks and branches.

2443. **D. platystoma,** Schw. Reg. Rep. 26 p. 85.
Dead trunks and branches.

2444. **D. atropunctata,** Schw. Reg. Rep. 26, p. 101.
Dead trunks and branches.

2445. **D. Duriæi,** Mont. Reg. Rep. 23, p. 63.
Dead trunks and branches.

2446. **D. virescens,** Schw. Reg. Rep. 23, p. 63.
Dead trunks and branches of beech.

2447. **D. quadrata,** Schw. (*L. obesa*, B. and C. *D. brunnea*, C. and P.)
Dead trunks and branches.

2448. **D. anomala,** Pk. Reg. Rep. 28, p. 72.
Dead trunks of *Corylus*.

842. DIATRYPELLA, Ces. and DeNot.

2449. **D. Cephalanthi,** Schw. Reg. Rep. 29, p. 58.
Dead *Cephalanthus occidentalis*.

2450. **D. discoidea,** C. and P. (*Diatrype discoidea*, C. and P. Reg. Rep. 28, p. 71.)
Dead *Betula populifolia*.

2451. **D. prominens,** Howe. Reg. Rep. 28, p. 72.
Dead *Platanus occidentalis*.

2452. **D. Tocciæana,** DeNot. Reg. Rep. 26, p. 86.
Dead *Alnus incana*.

843. MELANCONIS, Tul.

2453. **M. stilbostoma,** Fr. Reg. Rep. 26, p. 86. (*Valsa stilbostoma*. Fr. Reg. Rep. 22, p. 98.)
Dead trunks and branches.

2454. **M. bicornis,** Cke. Reg. Rep. 28, p. 72.
Dead *Platanus occidentalis*.

844. HERCOSPORA, Fr.

2455. **H. Tiliæ,** Fr.
Dead branches of *Tilia Americana*. *Sphœria Tiliæ*, Reg. Rep. 24, p. 99, is a synonym of this, as also are *Valsa Tiliæ*, *Valsaria Tiliæ* and *Valsa tilaginea*. *Rabenhorstia Tiliæ* and *Exosporium Tiliæ* are considered by some to be other conditions of this species.

845. CRYPTOSPORA, Tul.

2456. **C. suffusa,** Fr. (*Valsa suffusa*, Fr. Reg. Rep. 28, p. 74.)
Dead alders.

2457. **C. femoralis,** Pk. (*Valsa femoralis*, Pk. Reg. Rep. 28, p. 74.)
Dead alders and basswood.

846. QUATERNARIA, Tul.

2458. **Q. Persoonii,** Nke. (*Valsa quaternata*, Fr. Reg. Rep. 25, p. 103.)
Dead trunks and branches.

847. VALSA, Fr.

2459. **V. stellulata,** Fr. (*Diatryphe haustella*, Fr. Reg. Rep. 23, p. 63.)
Dead trunks and branches.

2460. **V. juglandicola,** Schw. Reg. Rep. 30, p. 64.
Dead trunks and branches of *Carya alba*.

2461. **V. nivea,** Fr. Reg. Rep. 22, p. 98.
Dead trunks and branches of poplars.

2462. **V. leucostoma,** Fr. Reg. Rep. 24, p. 98.
Dead branches of plums, etc.

2463. **V. salicina,** Fr. Reg. Rep. 24, p. 98.
Dead branches of willows.

2464. **V. ambiens,** Fr. Reg. Rep. 25, p. 102.
Dead branches of poplars, etc.

2465. **V. Platani,** Schw. Reg. Rep. 25, p. 103.
Dead branches of *Platanus*.

2466. **V. Vitis,** Schw. Reg. Rep. 25, p. 103.
Dead branches of *Vitis*.

2467. **V. Pini,** A. and S. Reg. Rep. 24, P. 99.
Dead branches of pine trees.

2468. **V. colliculus,** Wormsk. Reg. Rep. 25, p. 103.
Dead branches of pine trees.

2469. **V. Alni,** Pk. Reg. Rep. 25, p. 103.
Dead branches of alders.

2470. **V. centripeta,** Fr. Reg. Rep. 26, p, 86.
Dead branches of alders.

2471. **V. aculeans,** Schw. (*Sphæria aculeans*, Schw. Reg. Rep. 24, p. 99.)
Dead branches of sumach.

848. CUCURBITARIA, Fr.

2472. **C. elongata,** Grev. (*Sphæria elongata*, Fr. Reg. Rep. 23. p. 64.)
Dead branches of *Robinia*

2473. **C. Berberidis,** Gray. Reg. Rep. 30, p. 65.
Dead barberry.

849. MASSARIA, DeNot.

2474. **M. vomitoria,** B. and C. Reg. Rep. 23, p. 65.
Dead maple.

2475. **M. atroinquinans,** B. and C.
Dead buttonwood.

850. LOPHIOSTOMA, DeNot.

2476. **L. triseptata,** Pk. Reg. Rep. 28, p. 76.
Decaying wood.

851. SPHÆRIA, Hall.

Modern mycologists have divided the old genus *Sphæria* into many smaller genera with narrower limits. Most of our species fall readily enough into these modern genera, but in a few instances these generic limits are not wholly satisfactory, and will need some modification. So far as possible I have grouped our species with reference to these modern genera. C. H. P.

§ 1. *SPHÆRIA* proper.

2477. **S. monosperma,** Pk. Reg. Rep. 28, p. 79.
Decaying wood. There is a genus of lichens, *Sporopodium*, Mont., whose species have spores similar to those found in this *Sphæria*, but in other respects the plants are quite unlike.

2478. **S. exilis,** A. and S. Reg. Rep. 29, p. 61.
Decaying wood. The bristly perithecia separate this species from the genus *Cœlosphæria*. Perhaps the more comprehensive genus *Nitschkia* might include it.

2479. **S. morbosa,** Schw. Reg. Rep. 23, p. 64.
Living branches of plum and cherry trees. This species has been referred by some botanists to the genus *Cucurbitaria*, but it does not well agree with the characters of that genus. It comes very near to *Dimerosporium*, Fckl., from which its cylindrical (not ovoid) asci separate it.

2480. **S. fraxicola,** Schw. Reg. Rep. 25, p. 105.
Fallen ash leaves.

2481. **S. Daturæ,** Schw. Reg. Rep. 28, p. 79.
Dead stems of *Datura Tatula.*

§ 2. *ROSELLINIA*, DeNot.

2482. **S. aquila,** Fr. Reg. Rep. 23, p. 63.
Decaying wood and branches.

2483. **S. pulveracea,** Ehrh. Reg. Rep. 25, p. 104.
Decaying wood.

2484. **S. millegrana,** Schw.
This species scarcely differs from the preceding except in the size and shape of the spores.

2485. **S. hirtissima,** Pk. Reg. Rep. 28, p. 78.
Decaying wood of pine.

2486. **S. capillifera,** Curr.
Decaying wood.

2487. **S. mutans,** C. and P. Reg. Rep. 26, p. 87 : ibid. 29, p. 64.
Decaying wood.

§ 3. *BOMBARDIA*, Fr.

2488. **S. bombarda,** Batsch. Reg. Rep. 25, p. 104. (*Bombardia fasciculata* Fr.)
Decaying wood.

§ 4. *LEPTOSPORA*, Rabh.

2489. **S. spermoides,** Hoffm. Reg. Rep. 29, p. 61.
Decaying wood.

§ 5. *BERTIA*, DeNot.

2490. **S. moriformis,** Tode. Reg. Rep. 25, p. 104.
Decaying wood.

§ 6. *MELANOMMA*, Nke.

2491. **S. pulvis-pyrius,** Pers. Reg. Rep. 22, p. 99.
Decaying wood.

§ 7. *SORDARIA*, Ces. and DeNot.

2492. **S. coprophila,** Fr. (*Hypoxylon coprophila*, Fr. Reg. Rep. 23. p. 63.)
Cow dung.

2493. **S. leucoplaca,** B. and R. Reg. Rep. 25, p. 105.
Cow dung.

§ 8. *SPORORMIA*, DeNot.

2494. **S. minima,** And. Reg. Rep. 28, p. 78.
Cow dung.

§ 9. *LASIOSPHÆRIA*, Ces. and DeNot.

2495. **S. ovina,** Pers. Reg. Rep. 22, p. 99.
Decaying wood.

§ 10. *TRICHOSPHÆRIA*, Fckl.

2496. **S. exigua,** C. and P. Reg. Rep. 30, p. 65.
Decaying wood.

§ 11. *ECHNIOSPHÆRIA*, Fckl.

2497. **S. Clintonii,** Pk. Reg. Rep. 30, p. 65.
Decaying wood.

§ 12. *CERATOSTOMA*, Fr.

2498. **S. rostrata,** Tode. Reg Rep. 22, p. 99.
Decaying wood.

2499. **S. rubefaciens,** Pk. Reg. Rep. 28, p. 79.
Decaying wood.

2500. **S. pilifera,** Fr. Reg. Rep. 27, p. 110.
Decaying wood.

§ 13. *DIAPORTHE*, Nke.

2501. **S. spiculosa,** Pers. Reg. Rep. 29, p. 61.
Dead branches.

2502. **S. aculeata,** Schw. Reg. Rep. 22, p. 99.
Dead stems of herbs.

§ 14. *RAPHIDOPHORA*, Ces. and DeNot.

2503. **S. rubella,** Pers. Reg. Rep. 25, p. 104.
Dead stems of herbs.

2504. **S. acuminata,** Sow. Reg Rep. 22, p. 99.
Dead stems of *Cirsium*, etc.

§ 15. *ZIGNOELLA*, Sacc.

2505. **S. pulviscula,** Curr.
Decaying wood.

§ 16. *PLAGIOSTOMA*, Fckl.

2506. **S. eccentrica,** C. and P. Reg. Rep. 25, p. 105.
Dead stems of *Polygonum*.

§ 17. *PLEOSPORA*, Rabh.

2507. **S. Herbarum,** Pers. Reg. Reg. 30, p. 67.
Dead *Scirpus validus*.

2508. **S. infectoria,** Fckl.
Dead *Calamagrostis arenaria*.

§ 18. *LEPTOSPHÆRIA*, Ces. and DeNot.

2509. **S. Doliolum,** Pers. Reg. Rep. 23, p. 64.
Dead stems of herbs.

2510. **S. subconica,** C. and P. Reg. Rep. 26, p. 87.
Dead stems of herbs.

2511. **S. complanata,** Tode.
Dead stems of herbs.

2512. **S. staphylina,** Pk. Reg. Rep. 26, p. 86.
Dead branches of *Staphylea trifolia.*

2513. **S. taxicola,** Pk. Reg. Rep. 24, p. 99.
Leaves of *Taxus Canadensis.*

2514. **S. Hendersonia,** Ellis. (*S. fuscella*, B. and Br. Reg. Rep. 26, p. 87. *S. melantera*, Pk. Reg. Rep. 29, p. 62.)
Dead stems of *Rubus strigosus.*

§ 19. *GNOMONIA*, Ces. and DeNot.

2515. **S. fimbriata,** Pers. Reg. Rep. 22, p. 100.
Living leaves of *Carpinus* and *Ostrya.*

2516. **S. Coryli,** Batsch. Reg. Rep. 22, p. 100.
Living leaves of *Corylus.*

2517. **S. tubæformis,** Tode. Reg. Rep. 28, p. 80.
Fallen leaves of *Carya alba.*

2518. **S. melanostyla,** DC. Reg. Rep. 25, p. 105
Fallen leaves of *Rubus odoratus.*

2519. **S. amœna,** Nees. (*S. petiolorum*, Schw. Reg. Rep. 25, p. 105.)
Petioles of ash leaves.

852. SPHÆRELLA, DeNot.

2520. **S. maculæformis,** Pers. (*Sphæria maculæformis*, Pers. Reg. Rep. 26, p. 86.
Fallen leaves of *Nyssa.*

2521. **S. onosmodina,** Pk. (*Sphæria onosmodina*, Pk. Reg. Rep. 30, p. 67.)
Dead stems of *Onosmodium Carolinianum.*

2522. **S. Sarraceniæ,** Schw. (*Sphæria Sarraceniæ*, Schw. Reg. Rep. 24, p. 99.
Leaves of *Sarracenia purpurea.*

2523. **S. sparsa,** Amd. Reg. Rep. 28, p. 81.
Leaves of *Tilia* and *Betula.*

2524. **S. oblivia,** Cke. Reg. Rep 28, p. 81.
Leaves of *Rhododendron maximum.*

2525. **S. carpinea,** Fr. Reg. Rep. 28, p. 81.
Leaves of *Carpinus.*

2526. **S. indistincta,** Pk. Reg. Rep. 28, p. 81.
Fronds of *Pteris aquilina.*

2527. **S. Impatientis,** P. & C. Reg. Rep. 30, p. 67.
Leaves of *Impatiens fulva.*

853. VENTURIA, DeNot.

2528. **V. Clintonii,** Pk. Reg. Rep. 28, p. 82.
Leaves of *Cornus circinata.*

854. STIGMATEA, Fr.

2529. **S. Robertiani,** Fr. (*Dothidea Robertiani*, Fr. Reg. Rep. 23, p. 65.)
Living leaves of *Geranium Robertianum.*

855. MICROTHYRIUM, Desm.

2530. **M. Smilacis,** DeNot. Reg. Rep. 24, p, 85.
Dead stems of *Smilax.*

856. DICHÆNA, Fr.

2531. **D. faginea,** Fr. Reg. Rep. 22, p. 96.
Bark of living beech.

2532. **D. quercina,** Fr.
Bark of living oak.

Order 117. Characeæ.

857. CHARA, L.

2533. **C. fragilis,** Desv. (*C. fœtida* of authors.)

2534. **C. coronata,** Ziz.

858. NITELLA, Agardh.

2535. **N. flexilis,** Agardh.

Order 118. Algæ.

Sub-Order 1. RHODOPHYCEÆ.

859. BATRACHOSPERMUM, Roth.

2536. **B. moniliforme,** Roth.
Rapids of Niagara River, on the Canadian side, opposite Buffalo, June, 1882.

860. CHANTRANSIA, Fries.

2537. **C. violacea,** Kuetz. (*C. expansa*, H. C. Wood.)
Aurora, Erie Co. *Wolle.* Gowanda, Erie Co.

861. PORPHYRIDIUM, Naeg.

2538. **P. cruentum,** Naeg.
Johnson's Park, and on earth in a garden at No 83, Mohawk St., Buffalo. *J. W. Ward.*

SUB-ORDER 2. CHLOROPHYLLOPHYCEÆ,

862. APHANOCHÆTE, Braun.

2539. **A. repens,** A. Braun.
Abundant on *Œdogonium*, from the sulphur spring on the margin of Scajauquady's Creek, near Buffalo Park, Sept., 1882.

863. COLEOCHÆTE, Bréb.

2540. **C. scutata,** Bréb.
Abundant on *Typha*, *Anacharis*, etc.

864. CHÆTOPHORA, Schrank.

2541. **C. endiviæfolia,** Agardh.

2542. **C. elegans,** Agardh.

865. DRAPARNALDIA, Agardh.

2543. **D. plumosa,** Agardh.
Aurora, Erie Co. *Wolle.*

2544. **D. glomerata,** Agardh.
Alden, Erie Co.

866. STIGEOCLONIUM, Kuetz.

2545. **S. tenue,** Rabenh.
Aurora, Erie Co. *Wolle.*

2546. **S.** ————
Niagara River, West Seneca, Erie Co., and elsewhere.

867. CHROOLEPUS, Agardh.

2547 **C. aureum,** Kuetz.
Niagara Falls; Caledonia, Liv. Co. Miss *Mary L. Wilson.*

868. ULOTHRIX, Kuetz.

2548. **U. rivularis,** Kuetz.
Abundant in a spring in the grounds of the State Lunatic Asylum, Buffalo, Sept., 1882.

2549. **U. subtilis,** Kuetz.
Aurora, Erie Co. *Wolle.*

869. HORMISCIA, Aresch.

2550. **H. zonata,** Aresch.

870. BULBOCHÆTE, Agardh.

2551. **B. intermedia,** DeBary.
Gowanda, Erie Co.; Fort Erie, Ont.

871. ŒDOGONIUM, Link.

2552. **Œ. stagnata,** Wittr.
Scajauquady's Creek, Buffalo. Determined by *Wolle.*

2553. **Œ. pachydermum,** Wittr.
Scajauquady's Creek, Buffalo. Determined by *Wolle.*

872. CLADOPHORA, Kuetz.

2554. **C. canalicularis,** Roth.
Three Sisters Islands, Niagara Falls. *Wolle.*

2555. **C. glomerata,** Kuetz.
Everywhere in Niagara River where the current is strong.

2556. **C. fracta,** Dillw.
Wolle.

873. RHIZOCLONIUM, Kuetz.

2557. **R. Horsfordii,** Wolle.
Aurora, Erie Co. *F. H. Horsford.* (*Bull. Torr. Bot. Club, Vol. IX. p.* 26.)

874. CONFERVA, L.

2558. **C. bombycina,** Agardh.

875. VAUCHERIA, DC.

2559. **V. cæspitosa,** Agardh.

2560. **V. sessilis,** DC.
Aurora, Erie Co. *Woll*

876. HYDROGASTRUM, Desv.

2561. **H. Wallrothii,** Kuetz.
Damp earth, Buffalo. *Wolle.*

2562. **H. granulatum,** Desv.
Exposed soil, Buffalo. *Wolle.*

877. PLEUROCARPUS, A. Braun.

2563. **P. mirabilis,** A. Braun.

878. ZYGOGONIUM, Kuetz.

2564. **Z. anomalum,** Kuetz.

879. SPIROGYRA. Link.

2565. **S. crassa,** Kuetz.
Abundant at Squaw Island, Niagara River.

2566. **S. nitida,** Link.
Wolle.

2567. **S. elongata,** Kuetz.
Port Colborne, Ont., July 1, 1882.

2568. **S. quinina,** Kuetz.

2569. **S. longata,** Kuetz.
Wolle.

880. STAUROASTRUM, Meyen.

2570. **S. oxyacanthum,** Archer.

2571. **S. gracile,** Ralfs.

2572. **S. margaritaceum,** Menegh.

2573. **S. dejectum,** Bréb.

881. DIDYMOPRIUM, Kuetz.

2574. **D. Grevillii,** Kuetz.

882. PLEUROTÆNIUM, Naeg.

2575. **P. Baculum,** DeBary.

883. CLOSTERIUM, Nitzsch.

2576. **C. parvulum,** Naeg.

2577. **C. Dianæ,** Ehrb.

2578. **C. Lunula,** Ehrb.

884. PALMOGLŒA, Kuetz.

2579. **P. ————**, (?)

Gowanda, Erie Co., June, 1882.

885. VOLVOX, L.

2580. **V. Globator**, L.

Everywhere about Buffalo, in ponds and ditches. Especially abundant in autumn with *Chara fragilis*.

886. PEDIASTRUM, Meyen.

2581. **P. Boryanum**, Menegh.

887. HYDRODICTYON, Roth.

2582. **H. utriculatum**, Roth.

Immense quantities are in Niagara River, at the head of Squaw Island, and Scajauquady's Creek, in autumn.

888. SCENEDESMUS, Meyen.

2583. **S. quadricauda**, Bréb.

2584. **S. acutus**, Meyen., var **obliquus**, Rabenh.

2585. **S. obtusus**, Meyen.

Rare. On wall of old mill, Black Rock harbor, North Buffalo.

889. DICTYOSPHÆRIUM, Naeg.

2586. **D. pulchellum**, H. C. Wood.

In a swamp at Springville, Erie Co., June.

890. HORMOSPORA, Bréb.

2587. **H. geminella**, Wolle.

In pools of exposed water, Buffalo. *Wolle.* (*Bull. Torr. Bot. Club, Vol. VI, p.* 140.)

891. RHAPHIDIUM, Kuetz.

2588. **R. polymorphum**, Fresen.

In the Buffalo City water supply, and elsewhere.

892. TETRASPORA, Link.

2589. **T. lubrica**, Agardh.

Rivers and ponds in early summer. Abundant.

893. PALMELLA, Lyngb.

2590. **P. miniata**, Leibl.

Wet earth at Black Rock, (North Buffalo), June, 1882.

2591. **P. hyalina,** Bréb.
Abundant in ditches in April and May.

894. PLEUROCOCCUS, Menegh.

2592. **P. roseo-persicinus,** Rabenh.
Especially abundant on the submerged parts of water-plantain, (*Alisma Plantago.*)

2593. **P. miniatus,** Naeg.

2594. **P. vulgaris,** Menegh.

895. CYLINDROCAPSA, Reinsch.

2595. **C. geminata,** Wolle.
Wolle.

SUB-ORDER 3. PHYCOCHROMOPHYCEÆ.

896. SCHIZOSIPHON, Kuetz.

2596. **S. intertentus,** Grun.
Determined by *Wolle.*

2597. **S. crustiformis,** Naeg.
Determined by *Wolle.*

2598. **S. Cataractæ,** Naeg.
Niagara Falls, *Wolle.*

897. SYMPHYOSIPHON, Kuetz.

2599. **S. incrustans,** Kuetz.
On rocks exposed to the spray of Niagara Falls. *Wolle.*

2600. **S. Contarenii,** Kuetz.
In same situations with the last. *Wolle.*

898. ARTHROSIPHON. Kuetz.

2601. **A. alatus,** Rabenh. (*Petalonema alatum,* Berk)
"On dripping rocks under Biddle stair-case, Niagara Falls." *Harvey.*

899. DIPLOCOLON, Naeg.

2602. **D. Heppii,** Naeg.
Niagara Falls, *Wolle.*

900. SCYTONEMA, Agardh

2603. **S. chrysochlorum,** Kuetz.
Shaded rocks, Niagara Falls, *Wolle.*

2604. **S. Hagetschweilerii,** Rabenh.
Forming a dark brown coating on wet rocks, Niagara Falls. "Probably Wood's *S. cataracta.*" *Wolle.*

2605. **S. Austinii,** H. C. Wood. (?)
Wet rocks, Niagara Falls.

2606. **S. Cataractæ,** H. C. Wood.
"This species grows abundantly in Niagara River on the rocks below the great cataract." *H. C. Wood.*

901. MASTIGONEMA, Schwabe.

2607. **M. Orsinianum,** Kuetz.
"On rocks in rapids of Niagara River." *Wolle.*

2608. **M. cæspitosum,** Kuetz.

2609. **M. plana,** Rabenh.
Wet rocks at Portage, Genesee River. *Wolle.*

902. ZONOTRICHIA, J. Agardh.

2610. **Z. mollis,** H. C. Wood.
Cave of the winds, Niagara Falls. *H. C. Wood.*

2611. **Z. parcezonata,** H C. Wood.
Cave of the winds, Niagara Falls. *H. C. Wood.*

2612. **Z. chrysocoma,** Rabenh.
Moist earth, Niagara Falls. *Wolle.* *Wolle* suggests that Wood's *Z. parcezonata* is probably only the young growth of this species. (*Bull Torr. Bot. Club, Vol. VI, p.* 138.)

903. RIVULARIA, Agardh.

2613 **R. cartilaginea,** H. C. Wood.
Niagara River in autumn, on various aquatic plants.

904. GLOIOTRICHIA, J. Agardh.

2614. **G. incrustata,** H. C. Wood.
Scajauquady's Creek, Buffalo, Sept., 1882: its abundant, gelatinous spheres attached to various plants.

2615. **G. gigantea,** Trent.

2616. **G. natans,** Thuret.
"Fronds attached to water plants in pools, Buffalo." *Wolle.*

905. CYLINDROSPERMUM, Kuetz.

2617. **C. flexuosum,** Rabenh.
In a pond at "The Front," Buffalo, Sept., 1882.

2618. **C. comatum,** H. C. Wood.

Niagara Falls. "Growing upon the ground in the marshes which border the river just above the Canadian Falls." *H. C. Wood.*

906. ANABÆNA, Bory.

2619. **A. intricata,** Kuetz.

Wolle.

2620. **A. Flos-aquæ,** Kuetz.

Squaw Island, Niagara River.

2621. **A. gigantea,** H. C. Wood.

Chautauqua Lake, Aug. 1879. This *Alga* had been driven by the winds into sheltered places along the south-western shore. The immense quantities of the plant gave the water, for several feet from the shore, the color of "pea soup," as mentioned by *H. C. Wood*, of the same plant in the brick yards at Philadelphia, where he discovered it.

907. NOSTOC, Vauch.

2622. **N. comminutum,** Kuetz.

In a pond at "The Front," Buffalo, May, 1882; Niagara City, Ont., June, 1882, and elsewhere.

2623. **N. commune,** Vauch.

Niagara Falls, Oct. 28, 1882. Abundant on moist ground, rocks, etc. Our plant agrees well with Rabenhorst's description except in the distance between the cells:—ours having the cells not loosely, but closely connected. *H. C. Wood* points out the same variation.

2624. **N. cæruleum,** Lyngb.

In ponds at "The Front," Buffalo, May and June.

2625. **N. sphæricum,** Vauch.

908. PHORMIDIUM, Kuetz.

2626. **P. vulgare,** Kuetz.

Aurora, Erie Co., *Wolle.*

909. OSCILLARIA, Bosc.

2627. **O. Imperator,** H. C. Wood.

Buffalo River, floating in dark, olive-colored masses, Sept., 1882.

2628. **O. neglecta,** H. C. Wood.

Trout pond at Gowanda, June, 1882. At various dates in Niagara River, forming colored strata.

2629. **O. Frœlichii,** Kuetz.
In thin, green strata, Black Rock harbor (North Buffalo), and elsewhere ; usually with *O. limosa.* Filaments often twisted together like the strands of a rope.

2630. **O. nigra,** Vauch.
Appearing in vast quantities in the ship canal at Black Rock, (North Buffalo), in June ; floating and attached.

2631. **O. limosa,** Agardh.
Everywhere in thin green strata.

910. BEGGIATOA, Trevisan.

2632. **B. nivea,** Rabenh.
Sulphur Spring, Niagara Falls. *Wolle.*

911. HYPHEOTHRIX, Kuetz.

2633. **H. æruginea,** Wolle.

912. SYNECHOCOCCUS, Naeg.

2634. **S. elongatus,** Naeg.
Aurora, Erie Co., *Wolle.*

913. MERISMOPEDIA, Meyen.

2635. **M. nova,** H. C. Wood.
Buffalo City water supply. Abundant in a spring by the road side at Sawyer's Creek, Niagara Co., Sept. 1, 1881.

914. GLŒOCAPSA, Kuetz.

2636. **G. sparsa,** H. C. Wood.
Wet rocks at Niagara Falls, Oct. 28, 1882.

2637. **G. janthina,** Naeg.
Cliffs, Niagara Falls. *Wolle.*

2638. **G. æruginosa,** Kuetz.
Niagara Falls.

915. CHROOCOCCUS, Naeg.

2639. **C. multicoloratus,** H. C. Wood.
Wet earth along the margin of Scajauquady's Creek, with other *Algæ.* Our plant agrees well with Wood's description and figures, except only that the colors observed were the usual blue-green and yellowish.

2640. **C. rufescens,** Naeg.
Niagara Falls. *Wolle.*

Sub-Order 4. DIATOMOPHYCEÆ.

916. CLYTOTELLA, Kuetz.

2641. **C. operculata,** Kuetz.
Buffalo City water supply.

2642. **C. Americana,** J. W. Ward, *incd.*
Buffalo. *J. W. Ward.*

917. ACTINOCYCLUS, Ehrb.

2643. **A. Niagaræ,** H. L. Smith.
Buffalo City water supply.

918. STEPHANODISCUS, Ehrb.

2644. **S. Niagaræ,** Ehrb.
Buffalo City water supply.

919. MELOSIRA, Agardh.

2645. **M. Crotenensis,** H.
Buffalo City water supply.

2646. **M. varians,** Agardh.
Aurora, Erie Co. *Wolle.*

920. SURIRELLA, Turpin.

2647. **S. linearis,** Sm.
Buffalo. *J. W. Ward.*

2648. **S. biseriata,** Bréb.
Hamburg, Erie Co. *E. S. Nott.*

2649. **S. angusta,** Kuetz.
Buffalo. *J. W. Ward.*

2650. **S. splendida,** Kuetz.
Buffalo City water supply.

2651. **S. turgida,** Sm.
Buffalo City water supply.

2652. **S. ovalis,** Bréb.
Buffalo City water supply.

2653. **S. ovata,** Kuetz.
Buffalo City water supply.

2654. **S. minuta,** Bréb.
Buffalo. *J. W. Ward.*

921. CYMATOPLEURA, Sm

2655. **C. elliptica**, Sm.
Buffalo City water supply.

2656. **C. Solea**, Sm.
Buffalo City water supply.

922. EPITHEMIA, Bréb.

2657. **E. turgida**, Kuetz.
Buffalo. *J. W. Ward.*

2658. **E. Sorex**, Kuetz.
Buffalo. *J. W. Ward.*

2659. **E. ventricosa**, Kuetz.
Buffalo. *J. W. Ward.*

2660. **E. gibba**, Kuetz.
Buffalo. *J. W. Ward.*

2661. **E. Argus**, Kuetz.
Buffalo. Rare. *J. W. Ward.*

2662. var **alpestris**, Rabenh. (*E. alpestris*, Sm.)
On bark of trees, Buffalo. *J. W. Ward.*

923. EUNOTIA, Ehrb.

2663. **E. Arcus**, Kuetz. (*Himantidium Arcus*, Ehrb.)
Aurora, Erie Co. *Wolle.*

2664. **E.** *sp.*
Buffalo. *J. W. Ward.*

924. CYMBELLA, Agardh.

2665. **C. cuspidata**, Kuetz.
Buffalo City water supply.

2666. **C. maculata**, Kuetz.
Buffalo. *J. W. Ward.* Hamburg, Erie Co. *E. S. Nott.*

2667. **C. ventricosa**, Agardh.
Buffalo. *J. W. Ward.*

2668. **C. lunata**, Sm.
Buffalo. *J. W. Ward.*

925. COCCONEMA, Ehrb.

2669. **C. lanceolata**, Ehrb. (?)
Hamburg, Erie Co. *E. S. Nott.*

2670. **C. cymbidiformis,** Ehrb., (?)
Buffalo. *J. W. Ward.*

2671. **C. gibba,** Ehrb.
Buffalo. *J. W. Ward.*

2672. **C. parva,** Sm.
Buffalo. *J. W. Ward.*

926. ENCYONEMA, Kuetz.

2673. **E. prostratum,** Ralfs.
Hamburg, Erie Co. *E. S. Nott.*

927. AMPHORA, Ehrb.

2674. **A. ovalis,** Kuetz.
Buffalo City water supply.

2675. **A. gracilis,** Ehrb.
Buffalo. *J. W. Ward.*

928. COCCONEIS, Ehrb.

2676. **C. Pediculus,** Ehrb.
Buffalo.

2677. **C. rhombea,** Ehrb.
Buffalo. *J. W. Ward.*

2678. **C. striolata,** Rabenh.

929. RHOICOSPHENIA, Grun.

2679. **R. curvata,** Grun. (*Gomphonema curvatum,* Kuetz.)

930. ODONTIDIUM, Kuetz.

2680. **O. hyemale,** Kuetz.
Aurora, Erie Co. *Wolle.*

931. FRAGILLARIA, Agardh.

2681. **F. capucina,** Desmaz.
Buffalo City water supply.

2682. **F. virescens,** Ralfs.
Buffalo. *J. W. Ward.*

2683. **F. Harrisonii,** Sm. (*Odontidium Harrisonii,* Sm.)
Hamburg, Erie Co. *E. S. Nott.*

2684. **F. Crotonensis,** Bailey.
Buffalo City water supply.

932. SYNEDRA, Ehrb.

2685. **S. angustata,** Kuetz.
Buffalo. *J. W. Ward.*

2686. **S. linearis,** Ehrb.
Buffalo. *J. W. Ward.*

2687. **S. pulchella,** Kuetz.
Buffalo. *J. W. Ward.*

2688. var. **fasciculata,** Rabenh. (*S. fasciculata,* Sm.)
Buffalo. *J. W. Ward.*

2689. **S. Vaucheriæ,** Kuetz.
Hamburg, Erie Co. *E. S. Nott.*

2690. **S. Ulna,** Ehrb.
Buffalo City water supply.

2691. **S. capitata,** Ehrb.
Buffalo City water supply.

2692. **S. radians,** Kuetz.
Hamburg, Erie Co. *E. S. Nott.*

933. ASTERIONELLA, Hassall.

2693. **A. formosa,** Hassall.
Buffalo City Water supply.

934. AMPHIPLEURA, Kuetz.

2694. **A. pellucida,** Kuetz.
Hamburg, Erie Co. *E. S. Nott.*

935. NITZSCHIA, Hassall.

2695. **N. sigmoidea,** Sm.
Buffalo. *J. W. Ward.* Hamburg, Erie Co. *E. S. Nott.*

2696. **N. curvula,** Ehrb.
Hamburg, Erie Co. *E. S. Nott.*

2697. **N. tenuis,** Sm.
Buffalo. *J. W. Ward.*

2698. **N. minutissima,** Grun. (?)
Buffalo. *J. W. Ward.*

936. NITZSCHIELLA, Rabenh.

2699. **N. acicularis,** Rabenh. (*Nitzschia acicularis,* Sm.)
Buffalo City water supply.

937. NAVICULA, Bory.

2700. **N. cuspidata,** Kuetz.
Buffalo. *J. W. Ward.* Hamburg, Erie Co. *E. S. Nott.*

2701. **N. rhomboides,** Ehrb.
Hamburg, Erie Co. *E. S. Nott.*

2702. **N. pygmæa,** Kuetz. (*N. minutula,* Sm.)
Buffalo. *J. W. Ward.*

2703. **N. minutissima,** Grun.
Buffalo. *J. W. Ward.*

2704. **N. Amphisbæna,** Bory.
Buffalo. *J. W. Ward.*

2705. **N. rhyncocephala,** Kuetz.
Buffalo. *J. W. Ward.*

2706. **N. ambigua,** Ehrb.
Buffalo. *J. W. Ward.*

2707. **N. firma,** Kuetz. (?)
Buffalo. *J. W. Ward.*

2708. **N. cryptocephala,** Kuetz.
Buffalo. *J. W. Ward.* Hamburg, Erie Co. *E. S. Nott.*

2709. **N. Hebes,** Ralfs. (*N. obtusa,* Sm.)
Buffalo. *J. W. Ward.*

2710. **N. gracillima,** Pritch., var. **tenuis,** Rabenh. (*Pinnularia tenuis,* Greg.)

2711. **N.** *sp.* (?)
Buffalo. *J. W. Ward.*

938. PINNULARIA, Ehrb.

2712. **P. major,** Rabenh.
Buffalo. *J. W. Ward.*

2713. **P. viridis,** Rabenh.
Buffalo. *J. W. Ward.*

2714 **P. gibba,** Ehrb.
Buffalo. *J. W. Ward.*

2715. **P. radiosa,** Rabenh.
Buffalo. *J. W. Ward.*

2716. **P. nobilis,**
Hamburg, Erie Co. *E. S. Nott.*

2717. var. ————
Hamburg, Erie Co. *E. S. Nott.*

2718. **P. oblonga,** Rabenh.
Buffalo. *J. W. Ward.*

939. FRUSTULIA, Agardh.

2719. **F. membranacea.**

2720. **F. minuta.**

940. PLEUROSIGMA, Sm.

2721. **P. attenuatum,** Sm.
Buffalo. *J. W. Ward.*

2722. **P. acuminatum,** Kuetz., var. **lacustre,** Rabenh
(*P. lacustre,* Sm.)
Buffalo. *J. W. Ward.*

2723. **P. Spencerii,** Sm.
Hamburg, Erie Co. *E. S. Nott.*

2724. **P.** *sp.*
Buffalo City water supply.

941. STAURONEIS, Ehrb.

2725. **S. Phœnicenteron,** Ehrb.
Hamburg, Erie Co. *E. S. Nott.*

2726. **S. gracilis,** Ehrb.
Buffalo. *J. W. Ward.*

2727. **S. anceps,** Ehrb.
Buffalo. *J. W. Ward.*

942. AMPHIPRORA, Ehrb.

2728. **A. ornata,** Bailey.
Buffalo City water supply.

943. GOMPHONEMA, Agardh.

2729. **G. dichotomum,** Kuetz.

2730. **G. capitatum,** Ehrb.

2731. **G. geminatum,** Agardh.
Hamburg, Erie Co. *E. S. Nott.*

2732. **G. acuminatum,** Ehrb.

2733. **G. olivaceum,** Kuetz.
Hamburg, Erie Co. *E. S. Nott.*

2734. **G. Herculaneum,** Ehrb.
Niagara. Rabenhorst's "*Flora Eur. Alg.*"

944. MERIDION, Agardh.

2735. **M. circulare,** Agardh.
Hamburg, Erie Co. *E. S. Nott.*

2736. **M. constrictum,** Ralfs.
Hamburgh, Erie Co. *E. S. Nott.*

945. TABELLARIA, Ehrb.

2737. **T. fenestrata,** Kuetz.
Buffalo City water supply.

946. RHIZOSOLENIA, Ehrb.

2738. **R. Eriensis,** H. L. Smith.
Buffalo City water supply.

2739. **R. gracilis,** H. L. Smith.
Buffalo City water supply.

Tabular View of the Flora of Buffalo and its Vicinity.

NAMES OF ORDERS.	No. of Genera,	No. of Species and Varieties
1. Ranunculaceæ,	15	36
2. Magnoliaceæ,	2	2
3. Anonaceæ,	1	1
4. Menispermaceæ,	1	1
5. Berberidaceæ,	4	4
6. Nymphæaceæ,	3	3
7. Sarraceniaceæ,	1	1
8. Papaveraceæ,	4	5
9. Fumariaceæ,	4	6
10. Cruciferæ,	16	36
11. Capparidaceæ,	2	2
12. Resedaceæ,	1	1
13. Violaceæ,	2	14
14. Cistaceæ,	2	3
15. Droseraceæ,	1	1
16. Hypericaceæ,	2	6
17. Caryophyllaceæ,	10	23
18. Portulacaceæ,	2	4
19. Malvaceæ,	5	9
20. Tiliaceæ,	1	1
21. Linaceæ,	1	3
22. Geraniaceæ,	4	12
23. Rutaceæ,	2	2
24. Simarubaceæ,	1	1
25. Anacardiaceæ,	1	5
26. Vitaceæ,	2	4
27. Rhamnaceæ,	2	2

	NAMES OF ORDERS.	No. of Genera.	No. of Species and Varieties
28.	Celastraceæ,	2	4
29.	Sapindaceæ,	2	7
30.	Polygalaceæ,	1	3
31.	Leguminosæ,	17	45
32.	Rosaceæ,	15	52
33.	Saxifragaceæ,	6	13
34.	Crassulaceæ,	2	3
35.	Hamamelaceæ,	1	1
36.	Halorageæ,	2	4
37.	Onagraceæ,	5	11
38.	Lythraceæ,	2	2
39.	Cucurbitaceæ,	2	2
40.	Umbelliferæ,	21	26
41.	Araliaceæ,	1	5
42.	Cornaceæ,	2	8
43.	Caprifoliaceæ,	7	21
44.	Rubiaceæ,	4	13
45.	Valerianaceæ,	2	4
46.	Dipsaceæ,	1	1
47.	Compositæ,	51	143
48.	Lobeliaceæ,	1	4
49.	Campanulaceæ,	2	6
50.	Ericaceæ,	17	29
51.	Aquifoliaceæ,	2	3
52.	Plantaginaceæ,	1	3
53.	Primulaceæ,	5	11
54.	Lentibulaceæ,	2	4
55.	Bignoniaceæ,	1	1
56.	Orobanchaceæ,	3	3
57.	Scrophulariaceæ,	15	30
58.	Acanthaceæ,	1	1
59.	Verbenaceæ,	2	3
60.	Labiatæ, (Menthaceæ),	25	39
61.	Borraginaceæ,	9	16
62.	Hydrophyllaceæ,	1	2
63.	Polemoniaceæ,	2	6
64.	Convolvulaceæ,	3	8
65.	Solanaceæ,	8	13
66.	Gentianiaceæ,	3	8
67.	Apocynaceæ,	2	3

	NAMES OF ORDERS.	No. of Genera.	No. of Species and Varieties
68.	Asclepiadaceæ,	2	7
69.	Oleaceæ,	2	5
70.	Aristolochiaceæ,	1	1
71.	Phytolaccaceæ,	1	1
72.	Chenopodiaceæ,	4	10
73.	Amarantaceæ,	1	5
74.	Polygonaceæ,	3	24
75.	Lauraceæ,	2	2
76.	Thymelaceæ,	1	1
77.	Elægnaceæ,	1	1
78.	Santalaceæ,	1	2
79.	Saururaceæ,	1	1
80.	Ceratophyllaceæ,	1	1
81.	Callitrichaceæ,	1	1
82.	Euphorbiaceæ,	2	11
83.	Urticaceæ,	8	12
84.	Platanaceæ,	1	1
85.	Juglandaceæ,	2	6
86.	Cupuliferæ,	6	15
87	Myricaceæ,	2	3
88.	Betulaceæ,	2	6
89.	Salicaceæ.	2	22
90.	Coniferæ,	8	11
91.	Araceæ,	5	6
92.	Lemnaceæ,	3	4
93.	Typhaceæ,	2	4
94.	Naiadaceæ,	3	14
95.	Alismaceæ,	4	6
96.	Hydrocharidaceæ,	2	2
97.	Orchidaceæ,	14	34
98.	Iridaceæ,	3	3
99.	Dioscoreaceæ,	1	1
100.	Smilaceæ,	1	3
101.	Liliaceæ,	18	31
102.	Juncaceæ,	2	15
103.	Pontederiaceæ,	2	2
104.	Eriocaulonaceæ,	1	1
105.	Cyperaceæ,	9	105
106.	Gramineæ,	39	88
107.	Equisetaceæ,	1	7

	NAMES OF ORDERS.	No. of Genera.	No. of Species and Varieties
108.	Ophioglossaceæ,	2	5
109.	Filices,	14	32
110.	Lycopodiaceæ,	1	5
111.	Selaginellaceæ,	2	3
112.	Salviniaceæ,	1	1
113.	Musci,	47	165
114.	Hepaticæ,	19	24
115.	Lichenes,	45	204
116.	Fungi,	217	869
117.	Characeæ,	2	3
118.	Algæ,	88	204
	Total,	946	2739

Supplement.

That portion of the Catalogue which includes the names of our phænogamous plants was published early in the summer of 1882. Circumstances, for which the compiler and his associates in charge of its publication are in no degree responsible, have operated to prevent the appearance of the remainder of the work until the present time. This delay, however, has proved to be not altogether without compensations and advantages. By reason of it the opportunity has been given to bring the list much nearer completeness than otherwise would have been possible. Omissions, attributable to inadvertence or misunderstanding, have been supplied, doubts in respect to various questions have been settled, and the addition made of more than seventy-five phænogams which were then unknown as members of our Flora.

In fact, after the introduction to the Catalogue was in print, and whilst the list of phænogams was in the hands of the compositor, several species were, for the first time, detected within our territory, the names of which were at once assigned to their proper places in the list. Hence the discrepancy, (observed no doubt by many) between the number of the species of several genera, as stated in the introduction, and the number of the same as shown in the Catalogue itself. The preceding "Tabular View" has been designed to correct this discrepancy and display at a glance the numerical proportion which the species and genera of each family of our plants bears to our entire Flora.

The compiler has great pleasure in acknowledging the important kindness received by him from Judge CLINTON, who, with no little labor, prepared and placed at his use a list of

such phænogams as he had found within our limits, but which had not been named in the Catalogue. They are now embraced in this Supplement. To the localities of some of the rarer and more interesting plants he also made a large and valuable contribution.

Probably the most interesting addition now made to our list of plants is of that remarkable orchid, *Epipactis Helleborine*, Irm., found within the limits of our city, in July, 1882 :—its second discovery in America. But, without doubt, the very large addition of adventives, detected near the cattle yards at East Buffalo (chiefly from the far west), will arrest the attention of botanists and excite their surprise. Among these aliens are many plants of especial interest.

In this connection it may be said that of the 1,295 species and varieties of phænogamous plants, now enumerated as belonging to Buffalo and its vicinity, 1,011 are indigenous to the soil, and 284 have been introduced, inadvertently or by design.

The names of two species, only, require to be dropped from the Catalogue, as having been improperly included :—*Campanula glomerata*, L., (for which an aberrant form of *C. rapunculoides*, L. had been taken), and *Melica mutica*, Walt. Both these species had been named, with great hesitation, as members of our Flora.

These and other errors, more or less important, will be found corrected in the following list: but those which have seemed unlikely to mislead the student have not been noticed. The names of all genera and species included in the Catalogue having numerals affixed to them, reference to errors is made by such numbers rather than by page and line:— the more common, but, in the present instance, the less convenient way.

During the year 1882, attempts were made, in the interests of botanical science, to introduce into the vicinity of Buffalo, by seed or otherwise, the following named plants :—

Clematis verticillata, DC.
Diplotaxis tenuifolia, DC.
Anychia dichotoma, Michx.
Phlox paniculata, L.
Atriplex rosea, L.
Amarantus viridis, L.

Scleranthus annuus, L.
Epilobium hirsutum, L.
Diospyros Virginiana, L.
Plantago Virginica, L.
Dodecatheon, Meadia, L.
Origanum vulgare, L.
Pinus rigida, Miller.
Naias Indica, Braun.
Anthericum liliastrum, L.
Tradescantia Virginica, L.
Aristida, spec.
Eleusine Indica, Gaert.

It seems proper that the record of these attempts should here be made, so that in case these plants, or any of them, should thereby become established, the botanist of a future time may not make the mistake of supposing that we had overlooked them.

BUFFALO, July 1, 1883.

ADDITIONS.

Clematis verticillaris, DC.

Very rare. Portage, Wyom. Co. Discovered by Mrs. *M. B. Moody* and Miss *Belle Fish*, of the Buffalo Naturalists' Field Club, June, 1883. Two plants only.

Thalictrum purpurascens, L.

Within our territory: locality unrecorded. *Clinton.*

Ranunculus aquatilis, L., var. **stagnalis,** DC. (*R. divaricatus*, Schrank.)

Pools along Niagara River, Canadian side, near Clifton, July, 1882.

Ranunculus multifidus, Pursh.

Port Colborne, Ont., July, 1882.

Ranunculus Flammula, L., var. **reptans,** Meyer.

Abundant on the shore of Grand Island, Niagara River, near Sour Spring Grove. *Clinton.*

Hydrastis Canadensis, L.

Indian Reservation, near Cattaraugus Creek, Brandt, Erie Co.

Cimicifuga racemosa, Nutt.

Gowanda, Erie Co., July, 1882.

Nelumbium luteum, Willd.

Mr. CHARLES E. SMITH, of Philadelphia, a very competent botanist, states to us, in a letter, that in passing from Montreal to Niagara, through Canada, he saw, in a number of sluggish streams crossed by the railroad, this remarkable plant in bloom. The fact, tending as it does to confirm Mr. *Cowell's* observation, deserves to be mentioned here.

ARGEMONE MEXICANA, L.

The large white-flowered variety at East Buffalo. 1882.

Adlumia cirrhosa, Raf.

In a wood near Port Colborne, Ont., June, 1882.

Diclytra Cucullaria, DC. × **D. Canadensis,** DC.

Hybrids of these species found on Goat Is., Niagara Falls, and at West Seneca, Erie Co , May, 1883.

Cardamine pratensis, L.

Abundant at Connewango, Catt. Co. *C. Linden.*

SISYMBRIUM THALIANA, Gay.

From its abundance and wide diffusion at Point Abino, Ont., it seems scarcely possible that this plant is not there indigenous.

Sisymbrium canescens, Nutt.

No doubt remains that the plant collected near Indian Falls was of this species.

CAMELINA SATIVA, Crantz.

Abundant on the Plains, Buffalo, and at Bergen, Gen. Co. 1882.

LEPIDIUM CAMPESTRE, R. Br.

The smooth form at Bergen, Gen. Co., 1883. Miss *Belle M. Ross.*

RAPHANUS SATIVUS, L.

Often spontaneous in gardens and escaping.

RESEDA ODORATA, L.

Spontaneous in gardens and escaping. *Clinton.*

Ionidium concolor, Benth. and Hook.

Near the center of Goat Is., Niagara Falls. *Clinton.*

Viola sagittata, Ait.

"At Jamestown, Chaut. Co., and at Rochester, and must be in the district." *Clinton.*

Viola pubescens, Ait., var. **scabriuscula,** Torr. and Gray.

Common on Goat Is., Niagara Falls, and elsewhere.

Hypericum Canadense, L.

"Within our district." *Clinton.*

VACCARIA VULGARIS, Host.

Frequently springing up from the refuse of "bird seed."

MOLLUGO VERTICILLATA, L.

Plentiful at East Buffalo. 1882.

CALANDRINIA MENZIESII, Hook.

Well established in a garden in Buffalo, and likely to extend. 1882.

SIDA SPINOSA, L.

East Buffalo, Sept., 1882.

Rhus Toxicodendron, L.

An upright form of little height, on Goat Is., Niagara Falls. 1883.

VITIS LABRUSCA, L.

Dr. *Engelmann*, in a letter, dated Oct. 15, 1882, expresses great doubt of this species being indigenous at Niagara Falls, or elsewhere in our territory. A careful re-examination of the ground makes it quite certain that he is right. But that the plant frequently springs up, spontaneously, near vineyards in our vicinity is a matter of frequent observation.

Vitis cordifolia, Lam., var. **riparia,** Gray.

This variety, regarded by Dr. *Engelmann* as a distinct species, (*V. riparia*, Michx.), is common at Niagara Falls and along the river. It also occurs at Point Abino, Ont. The typical *V. cordifolia* probably does not belong within our limits.

Polygala incarnata, L.

"Near Niagara Falls, *Hook.*" (Beck's "*Botany of the U. S.*," p. 42.) Not seen by us.

Polygala ambigua, Nutt.

Reported by *J. F. Cowell* as growing at Portage, Wyom. Co. 1882.

Polygala paucifolia, Willd.

Reported by members of the Buffalo Naturalists' Field Club as found by them at Gowanda, Erie Co., May 19, 1883.

Lespedeza Stuvei, Nutt.

Near Buffalo. *Clinton.*

Phaseolus diversifolius, Pers.

Near the ruins of Fort Erie, Ont., Sept., 1883. *J. F. Cowell.*

Cassia Chamæchrista, L.

A few plants found, Sept. 1882, at East Buffalo.

POTERIUM SANGUISORBA, L.

Well established at Point Abino, Ont. 1883.

POTENTILLA SUPINA, L. (*P. paradoxa*, Nutt.)

At East Buffalo. 1882.

POTENTILLA RECTA, L.

At the wooded edge of a cultivated field near Clifton, Ont. 1882.

Rosa setigera, Michx.

Gowanda, Erie Co., July, 1883.

Rosa nitida, Willd.

Not uncommon.

ROSA MICRANTHA, Smith.

Common at Ft. Erie, Ont., July, 1882.

PYRUS MALUS, L.

Spontaneous in old fields near Port Colborne, Ont. 1882.

PYRUS COMMUNIS, L.

Occurring with *P. Malus* near Port Colborne, Ont. 1882.

Amelnachier Canadensis, Torr. and Gray.

The varieties, *Botryapium*, Torr. and Gray, *oblongifolia*, Torr. and Gray, and perhaps others, are within our limits.

Hydrangea arborescens, L.

In "the Gulf," at Warsaw, Wyoming Co., July, 1883. Miss *Belle M. Ross.*

Myriophyllum heterophyllum, Michx.

In pools, near Niagara River, above Clifton, Ont., July, 1882.

Sicyos angulatus, L.

Point Abino, Ont.

Berula angustifolia, Koch.

Near Port Colborne, Ont., July, 1882.

Eugeni abulbosa, Nutt.

Alden, Erie Co. *J. F. Cowell.*

Lonicera sempervirens, Ait.

Near Fredonia, Chaut. Co. Probably introduced. *Henry R. Jones.*

Galium trifidum, L., var. **latifolium,** Gray.

In the district. *Clinton.*

Aster corymbosus, Ait.

Common among the hills of the ALLEGANY DISTRICT. *Clinton.*

Aster macrophyllus, L.

Inadvertently omitted from the list.

Aster tenuifolius, L.

Rare. Bergen, Gen. Co. *Clinton.*

Aster acuminatus, Michx,

Smoke's Creek, West Seneca, Erie Co., and at "Rock City," near Salamanca, Catt. Co. *Clinton.*

Solidago Riddellii, Frank.

Judge *Clinton* is of the opinion that he once found this species at Bergen, Gen. Co.

AMBROSIA PSYLOSTACHYA, DC.

Reported by *J. F. Cowell* as having been found by him at East Buffalo.

Xanthium Canadense, Miller. (*X. strumarium*, L., of Gray's *Manual of Botany*). Bristly fruited. Not uncommon in waste places.

var. **echinatum,** (*X. strumarium*, var. *echinatum* of Gray's *Manual of Botany*). Hairy fruited. Shore of Lake Erie, Buffalo.

The true *X. strumarium*, L., a native of Europe, sparingly adventive at the East, has not been recognized here. It may be known by its fruit being entirely smooth.

HELIANTHUS PETIOLARIS, Nutt.

Adventive at East Buffalo. 1882.

HELIANTHUS LENTICULARIS, Dougl.

Adventive at East Buffalo. 1882.

COREOPSIS ARISTOSA, Michx.

Adventive at East Buffalo. 1882.

Bidens cernua, L.

Abundant near the shore of Niagara River, above Clifton, Ont., Oct., 1882.

BIDENS BIPINNATA, L.

Adventive at East Buffalo. 1882.

MATRICARIA INODORA, L. (?)

Springing up where "English Lawn Grass-seed" has been planted, but probably precarious. 1883.

ARTEMISIA VULGARIS, L.

Fort Erie, Ont. 1882.

Lactuca Canadensis, L., var. **integrifolia,** Torr. and Gray.

Inadvertently omitted from the list.

Lactuca Canadensis, L. var. **sanguinea,** Torr. and Gray.

Inadvertently omitted from the list.

LACTUCA SCARIOLA, L.

An adventive, well established at East Buffalo. 1882.

Vaccinium macrocarpon, Ait.

Point Abino, Ont. 1882.

Plantago Rugellii, Desc.

Here, as elsewhere, the species (erroneously called *P. Kamtschatica* in the Catalogue), proves to be very common and is often found growing with *P. major*, L.

VERBASCUM LYCHNITIS, L.

Very rare, and now probably extirpated. *Clinton.*

LINARIA CYMBALARIA, Mill.

A garden weed, often springing up from the refuse of "bird-seed." 1882.

Gerardia pedicularia, L.

Within our territory: station not given, but probably near Salamanca, Catt. Co. *Clinton.*

VERBENA ANGUSTIFOLIA, Michx.

Adventive at East Buffalo, Aug. 22, 1882.

VERBENA STRICTA, Vent.

Adventive at East Buffalo, Aug. 21, 1882.

VERBENA BRACTEOSA, Michx.

Adventive at East Buffalo, Aug. 7, 1882.

ORIGANUM VULGARE, L.

Within our territory: station not given. *Clinton.*

SATUREIA HORTENSIS, L.

The Plains, Buffalo. 1883. *J. F. Cowell.*

SALVIA GLUTINOSA, L.

Spontaneous in a garden in Buffalo and likely to spread.

Monarda didyma, L.

Gowanda, Erie Co., July 11, 1883.

HELIOTROPIUM EUROPÆUM, L.

A garden weed, Buffalo, and likely to continue.

IPOMŒA NIL, Roth.

Adventive at East Buffalo. 1882.

PHYSALIS PHILADELPHICA, Lam.

Not uncommon at East Buffalo. 1882.

DATURA STRAMONIUM, L.

Becoming common at East Buffalo. 1882.

Frasera Carolinensis, Walt.

In a woods about one and one-half miles west of Brock's Monument, Queenston, Ont. *Joseph Sturdy.*

Gentiana Saponaria, L.

Rare. A gentian, transplanted to a garden from the vicinity of Buffalo, proves to be of this species. Station unrecorded. 1882.

LIGUSTRUM VULGARE, L.

Well established near Clifton, Ont. 1882.

SYRINGA VULGARE, L.

Apparently spontaneous in one spot on Goat Is., Niagara Falls. 1883.

CHENOPODIUM GLAUCUM, L.

Now called *Blitum glaucum*, Watson. Common at East Buffalo, and at Lewiston, Niagara Co. 1882.

CHENOPODIUM URBICUM, L.

Common among the adventives at East Buffalo. 1882.

CHENOPODIUM MURALE, L.

East Buffalo; Bath Is., Niagara Falls. *Clinton.*

CHENOPODIUM AMBROSIOIDES, L.

The typical form sparingly at East Buffalo. 1882.

AMARANTUS BLITOIDES, Watson.

Common at East Buffalo. 1882.

AMARANTUS: (Species undetermined, probably new.)

Resembling *A. blitoides* and growing with it; but more erect, and with narrower and longer leaves. Seeds smaller and differently margined. Stems whitish. 1882. Native in Colorado.

AMARANTUS SPINOSUS, L.

At East Buffalo, but rare. 1882.

ACNIDA TAMARISCINA, Gray. (?)

An *Acnida*, probably of this species, rather plentiful at East Buffalo. 1882.

RHEUM RHAPONTICUM, L.

Spontaneous in neglected gardens and occasionally escaped. One large plant noticed in a woods on the Plains, Buffalo.

DAPHNE MEZEREUM, L.

One individual, perhaps planted, seen on Goat Is., Niagara Falls, growing beyond cultivated ground.

EUPHORBIA HYPERICIFOLIA, L.

Now common at East Buffalo. 1882.

Ulmus racemosa, Thomas.

A newly felled tree, noticed near Fort Erie, Ont., April, 1883.

Corylus Americana, Walt.

Goat Is., Niagara Falls. *Clinton.*

Populus balsamifera, L., var. **candicans,** Gray.

A single tree noticed growing near the margin of Niagara River, on the Canadian side, below the Falls, far from cultivation. 1882.

Potamogeton prælongus, Wulfen.

The Rev. *Thomas Morong*, who has examined our specimens, doubts the correctness of the determination of the plant here intended.

Potamogeton marinus,

A little above Niagara Falls on the Canadian side. Rev. *Thomas Morong.*

Habenaria fimbriata, Gray.

One plant, with pure white flowers, deliciously fragrant, found at Point Abino, Ont. 1882.

Epipactis Helleborine, var. **viridens,** Irm.

Near Scajauquady's Creek, Buffalo :—The second known station of the species on the American continent. Here first found by Miss *Edna M. Porter*, July, 1882. Equivalent, according to GRAY, to *E. latifolia*. The plant answers exceedingly well to the following generic description of *Epipactis*, (transcribed from WATSON'S *Botany of California*), except as noticed in our specific description below.

" EPIPACTIS, Haller.

" Perianth spreading, the sepals and petals nearly equal ; " lip free, deeply concave at the base, without callosities, nar- " rowly constricted and somewhat jointed in the middle, the " upper portion dilated and petaloid. Column short (equal- " ing the anther). Anther sessile behind the broad, truncate " stigma, on a slender jointed base, two celled, obtuse ; pol- " len masses coarsely granular, becoming attached above to " the gland capping the small rounded beak of the stigma. " Caulescent and leafy from creeping rootstocks ; flowers " few and pedicelled, rather large in our species, [*E. gigantea*, " Dougl.], with conspicuous bracts, divergent, and the " ovaries at right angles to the stem."

E. Helleborine, Irm. *Rootstocks not creeping.* Stems, one to several. Height from twelve to twenty-four inches. Leaves broadly ovate, two to three inches long, pointed, plicate. Raceme, before flowering, recurved, pubescent. *Flowers numerous (from thirty to fifty)*, in color varying from a light, greenish yellow to a dark, dull purple. The spoon-shaped lip very dark, covered with a viscid secretion. *Ovaries, as they approach maturity, reflexed.* July and August.

In our station certainly indigenous. About 200 individuals were counted, all growing within the space of a few hundred feet along a northerly hillside, from five to thirty feet above the creek. The diversity of color, which the flowers on different plants display, indicates that the variety, *viridens*, has no stability of character.

Cypripedium candidum, Muhl.

Collins, Erie Co. *J. F. Cowell.*

Sisyrinchium Bermudiana, L.

Both varieties, **anceps,** Gray, and **mucronata,** Gray, within our district. *Clinton.*

Erythronium Americanum, Smith.

Two varieties, the second of which has pure yellow, almost unspotted flowers, have been pointed out by Mr. COWELL.

Erythronium albidum, Nutt.

The variety found at Lake Superior by Dr. ROBBINS is thought to have been detected by Mr. COWELL, at West Seneca, Erie Co.

Allium cernuum, Roth.

At West Seneca, Erie Co., and at Portage, Wyoming Co. *J. F. Cowell.*

Juncus Canadensis, J. Gay.

The four varieties, recognized by GRAY in his *Manual,* in our district. *Clinton.*

Tradescantia Virginica, L.

Introduced at West Seneca, Erie Co.

Scirpus maritimus, L.

Black Rock pier, Niagara River, Buffalo.

Scirpus polyphyllus, Vahl.

Shores of Niagara River, Buffalo.

Carex cephalophora, Muhl.

Within our territory, station unrecorded. *Clinton.*

Carex chordorrhyza, Ehrh.

Sphagnous swamp at Cassadaga, Chaut. Co. *Clinton.*

Carex canescens, L., var. **vitilis,** Gray.

Within our territory, station unrecorded. *Clinton.*

Carex Deweyana, Schw.

Within our territory, station unrecorded. *Clinton.*

Carex scirpoides, Schk.

Within our territory, station unrecorded. *Clinton.*

Carex lagopodoides, Schk.

Within our territory, station unrecorded. *Clinton.*

Carex gracillima, Schw.

Within our territory, station unrecorded. *Clinton.*

Carex varia, Muhl.

Within our territory, station unrecorded. *Clinton.*

ERAGROSTIS POÆOIDES, Beauv., var. MEGASTACHYA, Gray.

An adventive at East Buffalo, 1882.

ERAGROSTIS PURSHII, Schrad.

An adventive at East Buffalo, 1882.

LOLIUM TEMULENTUM, L.

Near Buffalo, but very rare. *Clinton.*

HORDEUM JUBATUM, L.

Becoming plentiful at East Buffalo, 1882.

Phalaris arundinacea, L.

The striped variety native at Hamburgh, Erie Co.

PANICUM AGROSTOIDES, Spreng.

An adventive at East Buffalo, 1882.

PANICUM PROLIFERUM, Lam.

An adventive at East Buffalo, 1882.

CENCHRUS TRIBULOIDES, L.

This unwelcome grass, within a very short time, has become thoroughly established along the track of the Niagara Falls Railroad, near the foot of York Street, in this city, as well as at East Buffalo, and Ft. Erie, Ont.

Lecanora muralis, (Schreb.) Schær.

The varieties, **parella,** Fr., and **rosella,** Tuck., omitted by inadvertence.

CORRECTIONS.

For *Cerastium boreale,* (p. 70, l. 6,) read *Stellaria borealis.*

7. **Anemone Hepatica,** L. Change "Genesee" to "Wyoming."

15. **Ranunculus alismæfolius,** Geyer. Change specific name and that of its author to "**ambigens,** Watson."

27. **Trollius laxus,** Salisb. Change "Genesee" to "Wyoming."

68. **Cardamine rotundifolia,** Michx. Prof. WATSON, in transferring this name to the plant, which TORREY called *C. rhomboidea,* DC., *var. purpurea,* seems to have fallen into an error. (See GRAY'S note in the *Botanical Gazette,* Vol. 4, p. 210). But that the plant itself is entitled to specific rank admits, in our opinion, of little doubt.

71. **Cardamine hirsuta,** L., var. **sylvatica.** Add "Gray" as the authority for the variety.

85. BRASSICA NIGRA, Gray. Substitute "Koch" for "Gray."

92. THLASPI ARVENSIS, L.. Change "ARVENSIS" to "ARVENSE."

For "ORDER II. CAPSARIDACEÆ" read "ORDER II. CAPPARIDACEÆ."

123. DIANTHUS ARMERIA. Add "L" to denote the authority.

145. **Mollugo verticillata,** L. The plant, being with us an adventive, the name should have appeared in small capitals. It is now referred by the later authorities, to the natural order, FICOIDEÆ.

202. **Polygala paucifolia,** Willd. After "Eighteen-mile Creek," add "Evans."

229. **Lespedeza violacea,** Pers., var. **sessiliflora.** Add as the authority for the variety, "Torr. and Gray."

244. **Baptisia tinctoria,** R. Br. After "Salamanca" add "Catt. Co."

256. **Poterium Canadense,** Benth. & Hook. For "Cattaraugus" read "Chautauqua."

275. **Rubus Dalibarda,** L. Add, as a synonym, "(*Dalibarda repens*, L.)" But see GRAY'S note in regard to the name of the plant in the *Botanical Gazette*, Vol. 3, p. 210.

290. **Cratægus oxycantha,** L. For "**oxycantha**" read "**Oxyacantha.**"

297. **Pyrus arbutifolia,** var. **melanocarpa,** Gray. After the specific name add "L.," to denote the authority.

316. **Hamamelis Virginica,** L. For the specific name "**Virginica**" substitute "**Virginiana.**" See WATSON'S *Bibliog. Index of N. A. Botany*, Vol. 1, p. 355.

324. **Epilobium palustre,** var. **lineare,** Gray. After the specific name insert "L.," to denote the authority.

346. **Selinum Canadense,** Michx. Remove "(*Conioselinum Canadensis*, Fischer.)" from its place after the generic name, "SELINUM," and insert the same after "S. Canadense, Michx." After the generic name add "L." to denote the authority.

355. **Chærophyllum sativum,** Lom. Change "Lom" to "Lam."

367. **Cornus Canadensis,** L. After "Cheektowaga," insert "Erie Co."

382. **Lonicera Tatarica.** Insert "L" after the specific name to denote the authority.

410. **Valeriana officinalis.** Insert "L" after the specific name to denote the authority.

420. **Tussilago Farfara,** L. This being at Buffalo a naturalized plant, the name should have appeared in small capitals.

429. **Aster ericoides,** L., var. **villosus.** After the name of the variety add "Gray" as the authority.

476. **Ambrosia trifida,** L. After the name of the variety, "**integrifolia,**" add "Torr. and Gray" as the authority.

499. **Dysodia chrysanthemoides,** Lag. This being with us an adventive plant, the name should have appeared in small capitals.

504. ACHILLEA MILLEFOLIUM, L. A native plant. The name therefore should *not* have appeared in small capitals.

518. **Gnaphalium uliginosum.** Add "L" to denote the authority.

549. **Prenanthes crepidina,** Michx. For "**crepidina**" read "**crepidinea.**"

564. CAMPANULA GLOMERATA, L. The plant here intended proves to be only a form of *C. rapunculoides*, L. The name must be erased.

600. **Plantago Kamschatica,** Cham. For "**Kamschatica,** Cham." read "**Rugelii,** Desc." See *Botanical Gazette,* Vol. 3, p. 95.

616. **Pinguicula vulgaris.** Insert "L" after the name to denote the authority. For "ORDER 60, MENTHACEÆ," read "ORDER 60, LABIATÆ."

693. **Ballota nigra,** L. An adventive plant. The name should have appeared in small capitals.

698. **Lithospermum officinale,** L. A naturalized plant. The name should have appeared in small capitals.

703. **Myosotis arvensis,** Hoffman. An adventive. The name should have appeared in small capitals.

709. **Heliophytum Indicum,** DC. An introduced plant. Therefore requiring small capitals.

718. **Ipomœa purpurea,** L. Introduced. Therefore requiring small capitals.

720. **Convolvulus arvensis,** L. An adventive. The name requires small capitals.

730. **Physalis viscosa,** L. For "**viscosa,** L." read "**Virginica,** Mill." See *Botanical Gazette,* Vol 2, p. 80.

735. HYOSCYAMUS NIGRUM, L. For "NIGRUM" read "NIGER."

776. AMARANTUS RETROFLEXUS, var. HYBRIDUS, Gray. Mr. WATSON is disposed to regard our plant as a variety of *A. chlorostachys,* Willd.

791. **Polygonum erectum,** L. Add, as a synonym, (*P. aviculare,* L., var. *erectum,* Roth.)

For 359. LINDERNA, Thunberg," read, "359. LINDERA, Thunberg." After "369. MORUS," insert "Tourn." to denote the authority for the name.

872. **Salix purpurea,** L. Introduced. The name therefore requires small capitals.

908. **Wolffia Columbiana,** Karsten. As the authority for *W. Brasiliensis,* read "Weddell" instead of "Karsten."

922. **Potamogeton Niagarensis,** Tuckerman. The Rev. THOMAS MORONG, who has made the genus *Potamogeton* a special study, regards *P. Niagarensis,* Tuckerman, as only a form of *P. pauciflorus,* Pursh.

945. **Habenaria peramœna,** Gray. For "**peramœna**" read "**fimbriata.**"

972. **Dioscorea villosa,** L. Mr. COWELL, in his statement relative to this plant, was misunderstood. He has, however, met with the plant in our vicinity. It has also lately been collected in Chautauqua Co.

1013. **Juncus articulatus,** L.

1014. var. **pelocarpus,** Gray. Our plant is now regarded as *J. alpinus,* Villars, var. *insignis,* Fries.

After "468, CAREX," insert "L" to denote the authority.

1159. **Melica mutica,** Walt. The name, for the present, must be erased.

After "504, PANICUM," insert "L" to denote the authority.

1209. **Panicum Xalapense.** Introduced. The name therefore requires small capitals.

1258. **Dicksonia pilosuiscula,** Willd. For the specific name substitute "**pilosiuscula.**"

524. SPHAGNUM. As the authority for the genus, substitute "Dill." for "Ehrh."

1480. **Theloschistes chrysopthalmus, L.** For the specific name and its authority, substitute "**chrysophthalmus**, Norm."

1485. **Parmelia tiliacea**, Ach. For "Ach.," as the authority for the species, substitute "Flk."

1562. **Rinodina sophodes,** (Ach.) Moss. For "Moss" read "Mass."

2049. **Septoria Erigerontis**, P. and C. In note, for "*annumu*" read "*annuus.*"

2144. **Uromyces Peltandraæ,** Howe. For specific name read "**Peltandræ.**"

2189. **Periconia calicioides,** Fr. In note, for "*Sporacybe*" read "*Sporocybe.*"

2432. **Dothidea Linderæ,** Ger. In note, for "*Lendera*" read "*Lindera.*"

Index of Generic Names.

Abies.....136, 197, 198, 218, 225
Abutilon.....88
Acalypha.....131
Acer.....91, 220
Achillea.....110, 267
Acnida.....263
Acorus.....137, 207
Actæa.....79
Actinocyclus.....244
Adiantum.....154
Adlumia.....81, 258
Adonis.....77
Ægidium.....208, 209
Ægerita.....210
Æthalium.....194
Æthusa.....100
Agaricus.....175
Agave.....202
Agrimonia.....95, 208
Agrostis.....149
Alectoria.....167
Ailanthus.....89
Aira.....152
Alisma.....139, 240
Allium.....144, 200, 265
Alnus.....134, 203, 226, 229
Alopecurus.....149
Althæa.....87
Alyssum.....83
Amarantus.....129, 213, 256, 263, 268
Ambrosia.....108, 212, 261, 267
Amelanchier.....97, 221, 260
Ampelopsis.....90
Amphicarpæa.....94, 208
Amphiopleura.....247
Amphiprora.....249
Amphora.....246
Amygdalus.....94
Anabæna.....242
Anacharis.....139, 236
Anagallis.....117
Andromeda.....72, 114, 223
Andropogon.....152, 206, 219
Anemone.....77, 204, 207
Aneura.....165
Angelina.....222
Angioridium.....194
Anomodon.....162
Antennaria.....111
Anthemis.....110
Anthericum.....257
Antirrhinum.....118
Anychia.....256
Aphanochæte.....236
Aphanorhegma.....160
Aphyllon.....117
Apios.....93
Aplectrum.....141
Apocynum.....126
Aquilegia.....78
Arabis.....71, 72, 82
Aralia.....101, 204
Archangelica.....100, 212
Arctium.....112
Arctostaphylos.....114
Arcyria.....196
Aregma.....204
Arenaria.....87
Arethusa.....140
Argemone.....81, 258
Arisæma.....137, 207
Aristida.....257
Aristolochia.....198
Arrhenatherum.....152
Artemisia.....71, 74, 110, 261
Arthonia.....172
Arthrosiphon.....240
Asarum.....128
Asclepias.....73, 126, 208
Ascobulus.....222
Ascophora.....214
Asimina.....70, 79
Asparagus.....143
Aspergillus.....212
Aspidium.....154
Asplenium.....154
Aster.....73, 106, 208, 260, 267
Asterionella.....247
Asteroma.....202
Astragalus.....92, 216
Atrichum.....161
Atriplex.....128, 256
Atropa.....125
Aulocomnium.....161
Avena.....151, 206
Azalea.....115

Azolla....156
Bactridium....203
Badhamia....194
Bæomyces....171
Ballota....122, 267
Balsamita....110
Baptisia....94, 267
Barbarea....83
Barbula....158
Bartramia....160
Batrachospermum....235
Beggiatoa....243
Bellis....107
Berberis....79
Berula....101, 260
Betula....134, 198, 229, 234
Biatoria....171
Bidens....109, 261
Blephilia....121
Blitum....128
Bœhmeria....132
Boletus....182, 213
Bombardia....232
Botrychium....153
Bovista....193
Brachyelytrum....149
Brasenia....80
Brassica....83, 266
Bromus....151
Brunella....121
Bryum....160
Buellia....172
Bulbochæte....237
Bulgaria....222
Buxus....213
Cacalia....111
Cakile....71, 84
Calamagrostis....149, 233
Calamintha....120
Calandrinia....258
Calla....137, 213
Callitriche....131
Calicium....173
Calocera....191
Calopogon....140
Caltha....78, 204
Calypso....72, 141
Calystegia (Convolvulus)....124
Camelina....83, 258
Camellia....203
Campanula....71, 113, 256, 267
Camptosorus....154
Campylopus....157
Cannabis....132
Cantharellus....180, 181
Capnodium....209
Capsella....83
Cardamine....82, 212, 258, 266
Carex....71, 73, 146, 265, 268
Carpinus..133, 212, 220, 226, 227, 228
[234, 235
Carum....101
Carya....132, 200, 202, 230
Cassandra....114, 192, 209
Cassia....94, 259
Castanea....133
Castilleia....119
Caulophyllum....80
Ceanothus....72, 90
Celastrus....90, 210, 226
Cenangium....221
Cenchrus....266
Centaurea....111
Cephalanthus....104, 229
Cerastium....87, 266
Ceratium....209
Ceratodon....159
Ceratophyllum....131
Cercis....70, 94
Cercospora....213
Cetraria....167
Chærophyllum....101, 267
Chætophora....236
Chamælirium....143
Chantransia....236
Chara....235, 239
Cheirospora....203
Chelidonium....81
Chelone....118, 201
Chenopodium....128, 197, 212, 263
Chilonectria....225
Chiloscypus....165
Chimaphila....115
Chiogenes....114
Chlorosplenium....220
Chondrioderma....194
Chroococcus....243
Chroolepis....236
Chrysanthemum....110
Chrysosplenium....98
Cichorium....112
Cicuta....100
Cimicifuga....79, 257
Cinna....149
Circæa....98, 205
Cirsium....111, 205, 213, 233
Cladium....146
Cladonia....171
Cladophora....237
Cladosporium....211
Clasterisporium....211
Clathrus....193
Claytonia....87, 204
Clavaria....190
Clematis....77, 256, 257
Cleome....84
Climacium....163, 191
Clintonia....71, 143
Closterium....238
Clytotella....244
Cocconeis....246
Cocconema....245

Cœlosphæria....231
Coleochæte....236
Coleosporium....208
Collema....169
Collinsia....118
Collinsonia....121
Colpoma....224
Colutea....199
Comandra....130, 209
Comatricha....195
Comptonia....133
Conferva....237
Coniocybe....173
Conioselinum (Selinum)....100
Coniothecium....203
Conium....101
Conomitrium....158
Conopholis....117
Conotrema....170
Convolvulus....124, 206, 268
Coprinus....179
Coptis....78, 199, 201
Corallorrhiza....141
Cordyceps....224
Coreopsis....109, 261
Coriandrum....101
Corispermum....71, 128
Cornus....102, 203, 205, 225, 235, 267
Corticium....189
Cortinarius....180
Corydalis....71, 81
Corylus....133, 229, 263
Coryneum....202, 222
Coryne....222
Cratægus....96, 267
Craterellus....187, 220
Craterium....194
Cronartium....209
Crucibulum....197
Cryptospora....230
Cryptosporium....197
Cryptotænia....101, 205
Cucubitaria....225, 231
Cudonia....217
Cuscuta....124
Cyathus....196
Cylindrocapsa....240
Cylindrospermum....241
Cylindrothecium....163
Cymatopleura....245
Cymbella....245
Cynoglossum....123
Cynosurus....150
Cynthia (Krigia)....112
Cyperus....145
Cyphella....190
Cypripedium....72, 141, 264
Cystopteris....155
Cystopus....212
Dacrymyces....192
Dactylis....150
Dædalea....185
Dalibarda (Rubus)....96, 204
Daldinia....226
Danthonia....151
Daphne....263
Datura....125, 232, 262
Daucus....100
Delphinium....79
Dentaria....82
Dermatea....220, 221
Desmatodon....158
Desmodium....92, 208, 216, 228
Diachæa....195
Dianthera....119
Dianthus....86, 201, 204, 266
Diatrype....211, 227, 228, 229, 230
Diatrypella....229
Dicentra (Diclytra)....81, 212, 258
Dichæna....235
Dichelyma....162
Dicksonia....155, 269
Diclytra....81, 212, 258
Dicranum....157
Dictyosphærium....239
Diderma....194, 195
Didymium....194
Didymodon....159
Didymoprium....238
Diervilla....104, 221, 228
Dimerosporium....231
Dinemasporium....202
Dioscorea....142, 268
Diospyros....257
Diplocolon....240
Diplodia....199
Diplopappus....107
Diplotaxis....256
Dipsacus....105
Dirca....130, 210
Discosia....200
Ditiola....192
Dodecatheon....257
Dothidea....228, 235, 269
Draba....83
Draparnaldia....236
Dracocephalum....121
Drosera....85
Drummondia....160
Dulichium....145
Dysodia....109, 267
Eatonia....150
Echinacea....108
Echinocystis....99
Echinospermum....123
Echium....122
Eleocharis....145
Eleusine....257
Elodes....86
Elymus....151

Empusa....214
Encalypta....159
Encyonema....246
Endocarpon....173
Endothia....228
Ephebe....169
Epichloe....224
Epicoccum....210
Epigæa....70, 114
Epilobium....99, 208, 257, 267
Epipactis....256, 264
Epiphegus....117
Epithemia....245
Equisetum....153, 202, 219
Eragrostis....150, 265, 266
Erechthites....111
Erigenia....101, 26c
Erigeron....106, 201
Eriocaulon....145
Eriophorum....146
Erysimum....83
Erysiphe....215, 216
Eryrthronium....144, 207, 265
Eunotia....245
Euonymus....91
Eupatorium....105
Euphorbia....71, 131, 207, 263
Eutypa....227
Evernia....167
Excipula....202
Exidia....190, 192
Exobasidium....192
Exosporium....202, 229
Fagopyrum....129
Fagus....133
Favolus....185
Fedia....105
Fegatella....165
Festuca....151
Fissidens....158
Fistulina....186
Flœrkea....89
Fontinalis....162
Fragaria....96
Fragillaria....246
Frasera....72, 125, 262
Fraxinus....127
Frullania....166
Frustulia....249
Fuligo....194
Fumaria....81
Funaria....160
Fusarium....210
Fusisporium....213
Galeopsis....122
Galinsoga....109
Galium....104, 205, 260
Gaultheria....114
Gaura....99
Gaylussacia....114
Geaster....193
Gelatinosporium....198
Gentiana....71, 72, 126, 206, 262
Geoglossum....217
Geranium....89, 235
Gerardia....119, 262
Geum....95
Gibbera....226
Gillenia....95
Gleditschia....94
Glœocapsa....243
Glœoporus....183
Gloiotrichia....241
Glonium....223
Glyceria....150
Glycyrrhiza....71, 92
Gnaphalium....110, 205, 267
Goodyera....140
Gomphonema....246, 249
Grandinia....187
Graphiola....209
Graphis....172
Gratiola....118
Guepinia....192
Gyalecta....170
Gymnosporangium....207
Gymnostichum....151
Gymnostomum....157
Gyromitra....216
Habenaria....73, 139, 264, 268
Hamamelis....98, 267
Hedeoma....121
Hedwigia....160
Helenium....109
Helianthemum....85
Helianthus....109, 205, 209, 261
Helicosporium....213
Heliophytum....123, 268
Heliopsis....108
Heliotropium....262
Helleborus....78
Helminthosporium....211
Helotium....220
Helvella....216
Hemerocallis....144
Hemiarcyria....196
Hendersonia....199
Hepatica (Anemone)....77, 207
Heracleum....100
Hercospora....229
Hesperis....82
Hexagona....185
Heterothecium....172
Hibiscus....88
Hieracium....112
Himantidium....245
Homalothecium....162
Hordeum....151, 266
Hormiscia....237
Hormospora....239

Houstonia 104
Hudsonia 71
Humulus 132
Hydnum 186, 187
Hydrangea 260
Hydrastis 79, 257
Hydrocotyle 99
Hydrodictyon 239
Hydrogastrum 238
Hydrophyllum 123, 206
Hygrophorus 180
Hymenochæte 189
Hyoscyamus 125, 268
Hypericum 71, 85, 207, 258
Hypheothrix 243
Hypnum 163
Hypochræa 225
Hypoderma 224
Hypomyces 225
Hypoxylon 226, 227, 232
Hyssopus 120
Hysteriographium 224
Hysterium 223, 224, 228
Ilex 71, 116, 223
Illosporium 210
Ilysanthes 118
Impatiens 89, 200, 204, 235
Inula 107
Ionidium 84, 258
Ipomœa 72, 124, 262, 268
Iris 142
Irpex 187
Isaria 209
Isoetes 156
Jeffersonia 80
Juglans 132, 202
Juncus 144, 207, 267, 268
Jungermannia 166
Juniperus 71, 136, 207, 224
Kalmia 115, 201
Kneiffia 187
Krigia 112
Lactarius 180
Lactuca 112, 261
Lamium 122
Lamproderma 195
Lampsana 112
Laportea 132
Lappa (Arctium) 112
Larix 136
Lathyrus 71, 93, 201, 208
Lecanactis 172
Lecanora 170, 266
Lechea 85
Lecidea 172
Lecythea 208
Ledum 70, 115
Leersia 149
Lemna (Spirodela) 137
Lentinus 181
Lenzites 182, 185
Leocarpus 195
Leontodon 112
Leonurus 122
Leotia 217
Lepachys 108
Lepidium 84, 258
Lepidozia 166
Leptodon 162
Leptogium 169
Leskea 162
Lespedeza 93, 207, 259, 267
Leucanthemum 110
Leucobryum 158
Leucodon 162
Liatris 105
Licea 195
Ligustrum 127, 262
Lilium 144, 208, 209
Limnobium 70
Linaria 118, 262
Lindera 130, 228, 268
Linnæa 103
Linum 71, 88
Liparis 141
Liriodendron 79, 200
Listera 71, 140
Lithospermum 71, 122, 268
Lobelia 71, 113, 200
Lolium 151, 266
Lonicera ..... 72, 103, 197, 198, 199, 215 [260, 267
Lophanthus 121
Lophiostoma 231
Lophocolea 165
Lophodermium 224
Ludwigia 99
Lunularia 165
Lupinus 91
Luzula 144
Lychnis 86
Lycium 125
Lycogala 196
Lycoperdon 193
Lycopodium 155
Lycopus 120
Lysimachia 116, 206
Lythrum 99
Macrosporium 211
Madotheca 166
Magnolia 79
Malva 87
Marasmius 176, 180
Marchantia 165
Marrubium 122
Martynia 117
Maruta 109
Massaria 231
Mastigobryum 166
Mastigonema 241

Matricaria 110, 261
Medeola 142
Medicago 92, 208
Melampyrum 119
Melampsora 208
Melanconis 229
Melanconium 202
Melanospora 226
Melica 150, 256, 268
Melilotus 92
Melissa 121
Melogramma 227
Melosira 244
Menispermum 79, 198
Mentha 120
Menyanthes 126, 209
Meridion 250
Merismopedia 243
Mertensia 123
Merulius 182, 186
Microstylis 72, 141
Microsphæria 215
Microthyrium 235
Milium 152
Mimulus 118
Mitchella 104
Mitella 97, 205
Mitrula 191, 216, 217
Mnium 161
Mollugo 87, 258, 267
Monarda 121, 262
Moneses 71, 115
Monotospora 211
Monotropa 116
Montelia (Acnida) 263
Morchella 216
Morus 132
Mucor 214
Muhlenbergia 149
Mulgedium (Lactuca) 113
Mycoporum 173
Myosotis 123, 268
Myriangium 171
Myrica 133
Myriophyllum 98, 260
Myxosporium 203
Nabalus (Prenanthes) 112, 200, 205
Næmatelia 192
Naias 138, 257
Nardosmia (Petasites) 105
Nasturtium 81
Navicula 248
Neckera 163
Nectria 225, 226
Neillia 94
Nelumbium 70, 80, 257
Nemopanthes 116, 212, 223
Nepeta 121
Nephroma 168
Nesæa 99
Nicandra 125
Nicotiana 125
Nigella 78
Nitella 235
Nitschkia 231
Nitzschia 247
Nitzschiella 247
Nodularia 190, 220
Nostoc 242
Nummularia 227
Nuphar 80
Nymphæa 80
Nyssa 102, 234
Oakesia 143
Odontia 187
Odontidium 246
Œdogonium 236, 237
Œnothera 99, 201
Onobrychis 93
Onoclea 155, 200
Onopordon 111
Onosmodium 122, 234
Onygena 214
Opegrapha 172
Ophioglossum 153
Orchis 139
Origanum 257, 262
Orthotrichum 159
Oryzopsis 150
Oscillaria 242
Osmorrhiza 101, 205
Osmunda 155, 228
Ostrya 133, 235
Ovularia 212
Oxalis 89, 215
Palmella 239
Palmogloea 239
Panicum 152, 266, 268
Pannaria 169
Panus 177, 181
Papaver 80
Pardanthus 142
Parmelia 167, 269
Parnassia 71, 97
Pastinaca 100
Patellaria 219, 220
Paxillus 180
Peckia 197
Pediastrum 239
Pedicularis 119, 206
Pellæa 154
Pellia 165
Peltandra 137, 207
Peltigera 168, 210
Penthorum 98
Pentstemon 72, 118
Perichæna 196
Periconia 211, 269
Peronospora 212
Pertusaria 170

Pestallozia....203
Petalonema....240
Petasites....70, 105
Peziza....190, 217, 220, 221
Phacidium....223
Phalaris....152, 266
Phallus....193
Phascum....157
Phaseolus....259
Phegopteris....154
Phlebia....187
Phleum....1 9
Phlox....124, 256
Phœnix....209
Phoma....197
Phormidium....242
Phragmidium....204
Phragmites....151, 206, 228
Phryma....120
Phyllachora....228
Phyllactinia....214
Phyllosticta....201
Physalacria....191
Physalis....125, 262, 268
Physarum....194, 196
Physcia....168
Physcomitrium....160
Physostegia....121, 206
Phytolacca....128
Picea....136
Pilacre....214
Pilea....132
Pileolaria....208
Pilobolus....214
Pimpinella....100, 205
Pinguicula....70, 71, 117, 268
Pinnularia....248
Pinus....136, 257
Pistillaria....191
Placodium....169
Plagiochila....166
Plantago....116, 257, 261, 268
Platanus....132, 199, 202, 229, 230
Platygyrium....163
Pleurocarpus....238
Pleurococcus....240
Pleurosigma....249
Pleurotænium....238
Pleurotus....177
Plicatura....182
Poa....150
Podisoma....207
Podophyllum....80, 204
Podosporium....211
Podosphæria....215
Pogonatum....161
Pogonia....140
Polanisia....84
Polemonium....123
Polyactis....213
Polycystis....207
Polygala....91, 201, 204, 259, 267
Polygonatum....143, 200, 201
Polygonum....73, 129, 199, 200, 206, 207 [208, 233, 268
Polymnia....108
Polypodium....153
Polyporus....182, 185, 221, 225, 226
Polythrincium....212
Polytrichum....161
Pontederia....144
Populus....134, 201, 208, 263
Porphyridium....236
Portulaca....87, 213
Potamogeton....73, 138, 263, 264, 268
Potentilla....95, 204, 219, 228, 259
Poterium....95, 259, 267
Pottia....158
Preissia....165
Prenanthes....112, 267
Primula....70, 71, 116
Prosartes....143
Proserpinaca....98
Protomyces....209
Prunus....94, 204
Ptelea....71, 89
Pteris....154, 235
Pterospora....71, 115
Ptilidium....166
Ptychogaster....196
Puccinia....204, 207
Pycnanthemum....120
Pylaisæa....162
Pyrenula....173
Pyrola....115, 209
Pyrus....96, 260, 267
Pyxine....168
Quaternaria....230
Quercus....72, 73, 133, 216. 224
Rabenhorstia....229
Radula....166
Ramalina....167
Ramularia....212
Ranunculus....72, 77, 207, 257, 266
Raphanus....258
Reseda....84, 258
Rhamnus....90, 226
Rhaphidium....239
Rheum....263
Rhizina....217
Rhizoclonium....237
Rhizosolenia....250
Rhododendron....115, 203. 224, 234
Rhoicosphenia....246
Rhus....90, 198. 200, 201, 208, 210 [226, 259
Rhinchospora....146
Rhytisma....223
Riccia....165
Ribes....97, 226, 228

Rinodina 170, 269
Rivularia 241
Robinia 92, 198, 231
Rosa 96, 202, 259, 260
Rubus ..... 96, 200, 204, 218, 221, 224 [234, 267
Rudbeckia 108
Rumex 130, 212
Sacidium 197
Sagedia 173
Sagittaria 139
Salix 73, 134, 208, 268
Salvia 121, 262
Sambucus 104, 201, 215, 228
Samolus 117
Sanguinaria 81
Sanguisorbia (Poterium) 95
Sanicula 100
Saponaria 86
Sarracenia 72, 80, 197, 234
Sassafras 130
Satureia 262
Saururus 130
Saxifraga 70, 71, 72, 97
Schenedesmus 239
Scheuchzeria 72, 139
Schistidium 160
Schizophyllum 182
Schizosiphon 240
Schollera 145
Scleranthus 257
Scleria 146
Scleroderma 194
Scirpus 72, 145, 198, 206, 233, 265
Scorias 209
Scrophularia 118, 201
Scutellaria 122
Scytonema 240
Sedum 98
Selaginella 156
Seligeria 157
Selinum 100, 267
Senecio 111
Sepedonium 213
Septonema 203
Septoria 200, 201, 269
Setaria 152
Shepherdia 130
Sicyos 99, 260
Sida 88, 259
Silene 86
Silphium 108
Silybum 111
Sinapis (Brassica) 83
Sirurella 244
Sisymbrium 71, 83, 258
Sisyrhinchium 142, 265
Sium (Berula, 101) 100
Smilacina 143, 197, 201
Smilax 142, 199, 235
Solanum 124
Solea (Ionidium) 84
Solenia 190
Solidago 73, 107, 208, 260
Sonchus 113
Sorghum 152
Sparganium 138, 207
Spartina 150
Spathularia 217, 225
Specularia 113
Spergula 87
Sphæria ..... 197, 201, 225, 226, 227, 228 [229, 230, 231, 234
Sphærella 234
Sphærobolus 197
Sphæronema 198
Sphæropsis 198
Sphærotheca 214
Sphagnœcetis 166
Sphagnum 157, 269
Sphinctrina 221
Spiræa 94
Spiranthes 140
Spirodela 137
Spirogyra 238
Sporendonema 214
Sporidesmium 203
Sporobolus 149
Sporocybe 198, 210, 211
Stachys 122
Stamnaria 219
Staphylea 72, 91, 202, 234
Stauroastrum 238
Stauroneis 249
Staurothele 173
Stellaria 72, 87, 266
Stemonitis 195
Stephanodiscus 244
Stereocaulon 171
Stereum 188, 189
Sticta 168
Stictis 222
Stigeoclonium 236
Stigmatea 235
Stilbospora 202
Stilbum 210
Streptopus 143
Streptothrix 212
Struthiopteris 155
Symphoricarpus 103
Symphyosiphon 240
Symphytum 122
Symplocarpus 137
Synallissa 169
Synechococcus 243
Synedra 247
Syringa 198, 262
Tabellaria 250
Tanacetum 110
Taraxacum 112, 205

Taxus....136, 234
Tetraphis....159
Tetraspora....239
Teucrium....120
Thalictrum....77, 257
Thaspium....100
Thelephora....188, 189
Thelia....162
Theloschistes....167, 269
Thlaspi....84, 266
Thuja....136, 199, 224
Thymus....120
Tiarella....98, 205
Tilia..73, 88, 198, 202, 210, 227, 229, 234
Tilmadoche....194
Timmia....161
Tofieldia....143
Torilis....100
Torrubia....224
Torula....203
Tradescantia....257, 265
Tragopogon....212
Trametes....185
Tremella....191
Tremellodon....187
Triblidium....224
Trichia....195, 196
Trichobasis....205, 206, 208
Trichocolea....166
Trichoderma....213
Tricholoma....176
Trichostomum....159
Tricuspis (Triplasis)....150
Trientalis....116
Trifolium....92, 220, 228
Triglochin....138
Trillium....142, 199
Trimmatostroma....203
Triosteum....104
Triphyragmium....204
Triplasis....71, 150
Triticum....151
Trogia....181
Trollius....78, 207, 266
Trypethelium....173
Tsuga....73, 136
Tubercularia....210
Tubulina....195
Tulostoma....193
Tussilago....106, 267
Tympanis....221
Typha....138, 236
Typhula....191
Ulmus....73, 131, 263
Ulothrix....237
Uncinula....214
Urceolaria....171
Uredo....205, 208
Urnula....221
Urocystis....207
Uromyces....207
Urtica....132, 269
Usnea....167
Ustilago....207
Utricularia....71, 117
Uvularia....143
Vaccaria....86, 258
Vaccinium....72, 114, 216, 261
Valeriana....105, 267
Vallisneria....139
Valsa....229, 230
Valsaria....229
Vaucheria....237
Venturia....235
Veratrum....142, 206
Verbascum....118, 197, 200, 261
Verbena....119, 200, 226
Vermicularia....199
Vernonia....105
Veronica....118
Verpa....216
Verrucaria....173
Verticillium....213
Vibrissea....217
Viburnum....104, 215, 222
Vicia....93
Vilfa....149
Vinca....126
Vincetoxicum....127
Viola....70, 72, 73, 84, 201, 258
Vitis....90, 195, 230, 259
Volvox....239
Waldsteinia....95, 201, 205
Weisia....157
Wolffia....137, 268
Woodwardia....154
Xanthium....108, 205, 261
Xanthoxylum....89
Xylaria....226
Xyloma....223
Zannichellia....138
Zanthoxylon (Xanthoxylon)....89
Zea....206, 207, 210
Zizania....149
Zizia (Pimpinella)....100
Zonotrichia....241
Zygadenus....142
Zygogonium....238

General Index.

PAGE.

Aciptilus montanus, The larva of. *David S. Kellicott*.....47, 51
Additional list of Coleoptera. *Ottomar Reinecke*.....55
Additional Notes on the Fauna of the Waterlime Group near Buffalo. *Julius Pohlman*.....41
Ægeria tricincta, The larva of. *David S. Kellicott*.....62
Aletia argillacea, Note respecting. *David S. Kellicott*.....61
Algæ of Buffalo. (*Plants of Buffalo and vicinity.*).....74
Allegany District, (Botanical,) defined. (*Plants of Buffalo and vicinity.*)..68, 69
Allegany River, mentioned. (*Plants of Buffalo and vicinity.*).....68
Ancaster, Ont.; Its altitude. (*Plants of Buffalo and vicinity.*).....69
Andromeda polifolia ; where observed. (*Plants of Buffalo and vicinity.*) ...72
Announcement of Vol. IV of the Bulletin.....1
Arabis Drummondii, at Pt. Abino, Ont. (*Plants of Buffalo and vicinity.*)...71
perfoliata, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*)..72
Artemisia biennis, an introduced plant. (*Plants of Buffalo and vicinity.*)....74
Canadensis, a lake-shore plant. (*Plants of Buffalo and vicinity.*)...71
Asclepias tuberosa, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).72
Asimina triloba, in Niag. and Orl. Counties. (*Plants of Buffalo and vicinity.*).70
Aster, a large genus at Buffalo. (*Plants of Buffalo and vicinity.*).....73
Batavia, Genesee Co., mentioned. (*Plants of Buffalo and vicinity.*) 65
Bear Lake, Chaut. Co. Its elevation. (*Plants of Buffalo and vicinity.*).....68
Bergen, Genesee Co.; A sphagnous swamp at. (*Plants of Buffalo and vicinity.*).....72
Black Creek, Ont., mentioned. (*Plants of Buffalo and vicinity.*).....72
Birds, Imitative and Ventriloquial Powers of. *E. E. Fish*.....23
Buffalo, City of ; its latitude, longitude, climate, etc. (*Plants of Buffalo and vicinity*.....67
Buffalo River, mentioned. (*Plants of Buffalo and vicinity.*).....67
Buthrotrepis Lesquereux, a fucoid of the Waterlime Group, *Julius Pohlman*.19
Cakile Americana, a lake-shore plant. (*Plants of Buffalo and vicinity.*).....71
Calypso borealis, one plant detected at Bergen. (*Plants of Buffalo and vicinity.*).....72
Campanula rotundifolia, at Niagara Falls and Portage. (*Plants of Buffalo and vicinity.*).....71
Canada, includes a portion of the Ontario District. (*Plants of Buffalo and vicinity*.....68

PAGE.
Cassadaga Lake, Chaut. Co., its elevation. (*Plants of Buffalo and vicinity.*).68
Cardinalis Virginianus, captured at Buffalo. *Charles Linden*.....63
Carex Œderi, at Niagara Falls. (*Plants of Buffalo and vicinity.*).....71
Cattaraugus County, altitude and climate of. (*Plants of Buffalo and vicinity.*).67
Carterella latitenta, mention of. *Henry Mills*.....59
tenosperma, mention of. *Henry Mills*.....59
tubisperma, description of. *Henry Mills*.....57, 59
Catocala amatrix, abundant at Buffalo. *David S. Kellicott*.....62
Ceanothus Americana, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).....72
Cephalanthus occidentalis, a food-plant of Darapsa versicolor. *David S. Kellicott*.....62
Ceratiocaris grandis, n. s., described. *Julius Pohlman*.....19
Cercis Canadensis, probably a native of the Ontario District. (*Plants of Buffalo and vicinity.*).....70
Certain Fossils of the Waterlime Group near Buffalo, Notes on. *Julius Pohlman*.....17
Chandler, Henry, acknowledgements to.....22, 75
Chautauqua County, Ancient Forests of, mentioned. *Charles Linden*.....33
Its elevation, etc. (*Plants of Buffalo and vicinity.*)... 68
Chautauqua Lake, description of. Its wild ducks. *Charles Linden*.....33
Its elevation. (*Plants of Buffalo and vicinity.*).....68
Cirsium lanceolatum, a food-plant of Platyptilus Cardui. *David S. Kellicott*.48
Clathrulina elegans, found at Hamburg, Erie Co. *David S. Kellicott*.....61
Clinton, Hon. George W., mentioned. (*Plants of Buffalo and vicinity.*).....65, 66, 75, 76
Clinton Herbarium, mentioned. (*Plants of Buffalo and vicinity.*).....66
Clintonia borealis, at "Rock City," Catt. Co. (*Plants of Buffalo and vicinity.*).....71
Clintonia umbellata, at "Rock City," Catt. Co. (*Plants of Buffalo and vicinity.*).....71
Coleoptera, Additional List of. *Ottomar Reinecke*.....55
New. *John L. LeConte, M. D.*.....27
observed and collected in the vicinity of Buffalo, List of. *Frank H. Zesch* and *Ottomar Reinecke*.....2
Connewango Creek, Chaut. Co., mentioned. *Charles Linden*.....33
Elevation of the land near. (*Plants of Buffalo and vicinity.*).....68
Corispermum hyssopifolium, a lake-shore plant. (*Plants of Buffalo and vicinity.*).....71
Corydalis flavula, at Point Abino, Ont. (*Plants of Buffalo and vicinity.*)....71
Cossus Robiniæ, food-plants of. *David S. Kellicott*.....30
Cresson, E. T., mentioned. *David S. Kellicott*.....47

PAGE.
Cristatella ophidioidea, identification of, at Buffalo. *David S. Kellicott*.....61
Cummings, Uriah, acknowledgement to. *Julius Pohlman*.....21
Cypripedium acaule, capture of a bee by. *David S. Kellicott*.....31
arietinum, not yet found. (*Plants of Buffalo and vicinity.*)....72
candidum, at Bergen, Gen. Co. (*Plants of Buffalo and vicinity.*) 72
Darapsa chœrilus, its food-plant. *Philip Fischer*.....62
Myron, mention of. *Philip Fischer*.....62
versicolor, mention of. *Philip Fischer*. 62
Day, David F., mention of.....30, 63
Article by.....65
Dawson, George, mentioned. *Henry Mills*.....59
Dictamnus Fraxinella, a food-plant of Papilio Thoas. *David S. Kellicott*....30
Dolichopterus machrocheirus, description of. *Julius Pohlman*.....20
Domestication of some of our Wild Ducks, Notes on. *Charles Linden*.....33
Douglass, the botanical collector, at Niagara Falls. (*Plants of Buffalo and vicinity.*).....65
Drummond, the botanical collector, at Niagara Falls. (*Plants of Buffalo and vicinity.*).....65
Ducks, Notes on the Domestication of some of our Wild. *Charles Linden*...33
Eccopsis Footiana, n. s., description of. *C. H. Fernald*.....53
Elephidion imbelle, n. s., description of. *John L. Le Conte, M. D.*.....26
Ellicottville, Catt. Co., elevation of land near. (*Plants of Buffalo and vicinity.*).....26
Epigæa repens, at "Rock City," Catt. Co. (*Plants of Buffalo and vicinity.*).....76
Epilobium coloratum, a food-plant of Eudryas Unio. *David S. Kellicott*....29
Erie District, (Botanical) defined. (*Plants of Buffalo and vicinity.*) .24, 68, 69
Erie, Lake, its elevation, etc. (*Plants of Buffalo and vicinity.*) 67, 68
Eudryas Unio; its food-plants. *David S. Kellicott*.....29
Eupatorium purpureum, a food-plant of Œdematophorus cretidactylus and Lioptilus homodactylus. *David S. Kellicott*.....48
Euphorbia polygonifolia, a lake-shore plant. (*Plants of Buffalo and vicinity.*)..71
Eurypterus Dekayii, collected near Buffalo. *Julius Pohlman*.....21
giganteus, n. s., described. *Julius Pohlman*..... 41
lacustris, collected near Buffalo. *Julius Pohlman*.....21
microphthalmus, mentioned. *Julius Pohlman*.....41
pachycheirus, description amended. *Julius Pohlman*.....19, 20
mentioned. *Julius Pohlman*.....42
pustulosus, mentioned. *Julius Pohlman*.....41
remipes, collected near Buffalo. *Julius Pohlman*.....21
robustus, collected near Buffalo. *Julius Pohlman*.....21
Eusarcus scorpionis, description of, corrected. *Julius Pohlman*..... 21

PAGE.
Falls of the Genesee, mention of. (*Plants of Buffalo and vicinity.*).....69
Falls of the Niagara, their effect on the atmosphere. (*Plants of Buffalo and vicinity.*).....71
Fauna of the Waterlime Group near Buffalo, Additional Notes on the. *Julius Pohlman*.....44
Fernald, C. S., Article by 53
Fischer, Philip, Article by.....62
Fish, Prof. Charles, Articles by.....48,51
Fish, E. E., Article by.....23
Fossils of the Waterlime Group near Buffalo, Notes on the. *Julius Pohlman*.....17
Frasera Carolinensis, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).....72
Fredericella regina, detected at Buffalo. *David S. Kellicott*.....61
Fringilla graminea, a ventriloquist. *E. E. Fish*.....25
Fulica Americana, abundant on Chautauqua Lake. *Charles Linden*.....34
Gay, Dr. Charles C. F., mentioned. (*Plants of Buffalo and vicinity.*).....65
Genesee County, the botany not yet fully explored. (*Plants of Buffalo and vicinity.*).....73
Genesee District, (Botanical,) defined. (*Plants of Buffalo and vicinity.*).....68
Genesee River, mentioned. (*Plants of Buffalo and vicinity.*).....68
Gentiana crinita, at Niagara Falls. *Plants of Buffalo and vicinity*).....71
puberula, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity*).....72
Glycyrrhiza lepidota, a lake-shore plant. (*Plants of Buffalo and vicinity.*).....71
Gray, Prof. Asa, mentioned. (*Plants of Buffalo and vicinity.*).....75
Habenaria, a large genus at Buffalo. (*Plants of Buffalo and vicinity.*).....73
Hall, Prof. James, mentioned. *Julius Pohlman*.....17, 19, 21
Hamilton, City of, mentioned. *Plants of Buffalo and vicinity.*).....69
Heliothis armiger, its abundance at Corunna, Mich. *David S Kellicott*.....61
Hudsonia tomentosa, mentioned. (*Plants of Buffalo and vicinity.*).....71
Huxley, Prof. Thomas H., mentioned. *Julius Pohlman*.....17, 19
Hylesinus Trifolii, abundant near Buffalo, 1880. *David S. Kellicott*.....29
opaculus, mentioned. *David S. Kellicott*.....30
Hypericum Kalmianum, at Niagara Falls, and Point Abino, Ont. (*Plants of Buffalo and vicinity.*).....71
Ichneumon humilis, destructive to the larvæ of Platyptilus Cardui. *David S. Kellicott*.....47
Ilex monticola, at "Rock City," Catt. Co. (*Plants of Buffalo and vicinity*).....71
Imitative and Ventriloquial powers of Birds. *E. E. Fish*.....23
Ipomœa pandurata, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).....72

PAGE.
Irwin, George, mentioned. *Charles Linden*.....33, 37, 38
Itasca Lake, mentioned. (*Plants of Buffalo and vicinity.*).....68
Juniperis communis, a lake-shore plant. (*Plants of Buffalo and vicinity.*),...71
Kalm, the botanist, at Niagara Falls in 1749. (*Plants of Buffalo and vicinity.*) 65
Kellicott, Prof. David S., Articles by.....28, 29, 30, 31, 47, 57
His list of Algæ of Buffalo. (*Plants of Buffalo and vicinity.*).....74
Kennicutt, Dr. John A., an early botanist of Buffalo. (*Plants of Buffalo and vicinity.*).....65
Lake Erie, its elevation, influence on climate, etc. (*Plants of Buffalo and vicinity.*).....34, 67, 68, 69
Lake Ontario, its elevation, influence on climate, etc. (*Plants of Buffalo and vicinity.*).....69, 70
Larvæ of some local Pterophoridæ, Notes on the *David S. Kellicott*.....47
Lathyrus maritimus, a lake-shore plant. (*Plants of Buffalo and vicinity.*)....71
Le Conte, Dr. John L., article by.....27
Ledum latifolium, mentioned. (*Plants of Buffalo and vicinity.*).....70
Leidy, Dr. Joseph, mentioned. *Henry Mills*.....58
Lewiston, Niagara Co., "Mountain Ridge" at. (*Plants of Buffalo and vicinity.*).....69
Limnobium Spongia, in Lake Ontario. (*Plants of Buffalo and vicinity.*).....70
Linden, Prof. Charles, Articles by.....33, 63
Linnæus, mentioned. (*Pants of Buffalo and vicinity.*).....65
Linum striatum, at Point Abino, Ont. (*Plants of Buffalo and vicinity.*).... 65
Lioptilus homodactylus, its larva known and reared. *David S. Kellicott* .47, 48
Kellicottii, its larvæ and their history. *David S. Kellicott*.....47, 51
List of the Coleoptera, observed and collected in the vicinity of Buffalo. *Frank H. Zesch* and *Ottomar Reinecke*.....2
List of Coleoptera, Additional. *Ottomar Reinecke*.....55
Listera cordata, a plant of, "Rock City," Catt. Co. (*Plants of Buffalo and vicinity.*).....71
Lithospermum hirtum, a lake-shore plant. (*Plants of Buffalo and vicinity.*).....71
Lobelia Kalmii, at Niagara Falls. (*Plants of Buffalo and vicinity*).....71
Lonicera oblongifolia, at Alabama, Gen. Co. (*Plants of Buffalo and vicinity.*).72
Machias, Catt. Co., mentioned. (*Plants of Buffalo and vicinity.*).....72
Mayville, Chaut. Co., mentioned. *Charles Linden*.....33
Melospiza melodia, its propensity to imitate. *E. E. Fish*.....23
Memphis, City of, its occasional winter temperature. (*Plants of Buffalo and vicinity.*).....67
Michaux, the botanist, at Buffalo, in 1807. (*Plants of Buffalo and vicinity.*).65
Microstylos monophyllos, at Machias, Catt. Co. (*Plants of Buffalo and vicinity.*).....72

PAGE.
Mills, Henry, Article by.....57
Mississippi River, mentioned. (*Plants of Buffalo and vicinity.*).....68, 69
Valley extends into Chaut. and Catt. Counties. (*Plants of Buffalo and vicinity.*).....68
Moneses uniflora, at Point Abino, Ont. (*Plants of Buffalo and vicinity.*) ..17
Monroe County, "Mountain Ridge" in. (*Plants of Buffalo and vicinity.*)...69
Montreal, City of, its occasional summer temperature. (*Plants of Buffalo and vicinity*.....67
"Mountain Ridge," its elevation and location. (*Plants of Buffalo and vicinity.*).....68, 69
Mud Lake, Chaut. Co., its elevation. (*Plants of Buffalo and vicinity.*).....68
Myodites Zeschii, n. s., description of. *John L. Le Conte, M. D.*.....28
Nelumbium luteum in Lake Ontario. (*Plants of Buffalo and vicinity.*).....70
New Coleoptera. *John L. Le Conte, M. D.*.....27
New England, its annual rain fall. (*Plants of Buffalo and vicinity.*).....68
New Tortricid. *C. H. Fernald*.....53
Niagara County, "Mountain Ridge" in. (*Plants of Buffalo and vicinity.*)..69
Niagara Escarpment, its elevation and location. (*Plants of Buffalo and vicinity.*).....68
Niagara River, mentioned. (*Plants of Buffalo and vicinity.*).....67, 69
Notes, Observations and. (*Various Authors.*).....29, 61
Notes on the Fauna of the Waterlime Group near Buffalo, Additional. *Julius Pohlman*.....41
Notes on the Imitative and Ventriloquial powers of birds. *E. E. Fish*.....23
Notes on the Larvæ of some local Pterophoridæ. *David S. Kellicott*.....47
Notes on the Spongillæ of Buffalo. *Henry Mills*.....57
Nott, E. S., of Hamburgh, Erie Co., discovers a new species of Spongilla. *Henry Mills*.....60
Oak Orchard Creek traverses the Ontario District. (*Plants of Buffalo and vicinity.*).....69
Observations and Notes. (*Various Authors.*).....29, 61
Œdematophorus cretidactylus, its larvæ reared. *David S. Kellicott*.....47, 48
Œme gracilis, n. s., described. *John L. Le Conte, M. D.*.....27
rigida, mentioned. *John L. Le Conte, M. D.*.....27
Œnethera biennis, a food plant of Eudryas Unio. *David S. Kellicott*.....29
Ohio River receives drainage of Chaut. and Catt. Counties. (*Plants of Buffalo and vicinity.*).....68
On certain Fossils of the Waterlime Group near Buffalo. *Julius Pohlman*...17
Ontario District, (Botanical), defined. (*Plants of Buffalo and vicinity.*)..74, 69
Ontario, Lake, its elevation and effect upon climate. (*Plants of Buffalo and vicinity.*).....69, 70
On the domestication of some of our Wild Ducks. *Charles Linden*.....33
Orleans County a part of the Ontario District. *Plants of Buffalo and vicinity.*).....69

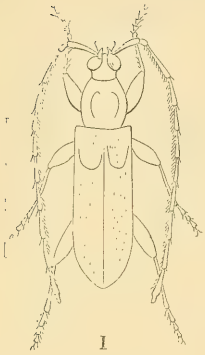
PAGE.
Oxyptilus periscelidactylus mentioned. *David S. Kellicott*.....47
nigrociliatus mentioned. *David S. Kellicott*.....47
Paludinella Ehrenbergii identified as a Buffalo Polyzoon. *David S. Kellicott*.61
Papilio Thoas, its larvæ detected in Buffalo. *David S. Kellicott*.....30
Parnassia Caroliniana at Niagara Falls. (*Plants of Buffalo and vicinity.*) ..71
Peck, Charles H., Acknowldgements to. (*Plants of Buffalo and vicinity.*)...74
Pectinatella magnifica, identified as a Buffalo Polyzoon. *David S. Kellicott*..61
Pennsylvania, annual rain-fall of. (*Plants of Buffalo and vicinity*).....70
Pentstemon pubescens, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*)..... 72
Petasites palmata, at Machias, Catt. Co. (*Plants of Buffalo and vicinity.*)...70
Phlœosinus liminaris, its injury to peach trees, at La Salle, Niagara Co. *David S. Kellicott*.....61
Pinguicula vulgaris, at Portage, Wyom. Co. (*Plants of Buffalo and vicinity.*).....70, 71
Pipilo erythrophthalmus, mentioned. *E. E. Fish*. 23
Plants of Buffalo and vicinity. *David F. Day*.....65
Platyptilus Cardui, its larvæ, etc. *David S. Kellicott*.....47
Bertrami, mentioned. *David S. Kellicott*.....47
Plumatella diffusa, identified as belonging to Buffalo. *David S. Kellicott*....61
Arethusa, identified as belonging to Buffalo. *David S. Kellicott*..61
vitrea, identified as belonging to Buffalo. *David S. Kellicott*.....61
Pohlman, Dr. Julius, Articles by.....75, 17, 41
Point Abino, Ont., character and plants of. (*Plants of Buffalo and vicinity.*).71
Populus candicans, a food-plant of Cossus Robinæ. *David S. Kellicott*.....30
a food-plant of Ægeria tricincta. *David S. Kellicott*.....62
tremuloides, a food-plant of Smerinthus modesta. *David S. Kellicott*.....29
Populus tremuloides, a food-plant of Cotocala amatrix. *David S. Kellicott*..62
Polygonum, a large genus at Buffalo. (*Plants of Buffalo and Vicinity.*).....73
Polyzoa, identified from Niagara River. *David S. Kellicott*.....61
Potamogeton, a large genus at Buffalo. (*Plants of Buffalo and vicinity.*)....73
Portage, Liv. and Wyom. Counties, Plants of. (*Plants of Buffalo and vicinity.*).....69
Potts, Edward, names Spongilla Ottawaensis. *Henry Mills*.....59
Primula Mistassinica, at Portage, Wyom. Co. (*Plants of Buffalo and vicinity.*) 70, 71
Ptelea trifoliata, a lake-shore plant. (*Plants of Buffalo and vicinity.*).....71
Pterogotus acuticaudatus, n. s., described. *Julius Pohlman*.....42
bilobus, mentioned. *Julius Pohlman* 45
Buffaloensis, n. s., described. *Julius Pohlman*.....17, 44
Cobbii, mentioned. *Julius Pohlman*.....44
Cummingsii, mentioned. *Julius Pohlman* ... .19, 44

PAGE.
Pterogotus globicaudatus, n. s., described. *Julius Pohlman*.....42
macrophthalmus, mentioned. *Julius Pohlman*.....44
n. s. ? carapace of, described. *Julius Pohlman*.....44
quadraticaudatus, n. s., described. *Julius Pohlman*.....43
Pterosphoridæ, Notes on the larvæ of some local. *David S. Kellicott*.....47
Pterosphorus monodactylus, a Buffalo moth. *David S. Kellicott*.....47
Cardui, a Buffalo moth. *David S. Kellicott*.....47
Cardui dactylus=P. Cardui. *David S. Kellicott*.....47
Pterospora Andromedea, a plant of the Niagara and Genesee Rivers. (*Plants of Buffalo and vicinity.*).....71
Pursh, the botanist, visits the country of the Great Lakes in 1806. (*Plants of Buffalo and vicinity.*).....65
Quebec, its occasional summer temperature. (*Plants of Buffalo and vicinity.*).67
Quercus, a large genus at Buffalo. (*Plants of Buffalo and vicinity.*).....73
alba, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*)..73
macrocarpa, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).....73
Muhlenbergii, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).....72
obtusiloba, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).....73
prinoides, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).....72
Ranunculus fascicularis, at the "Plains," Buffalo (*Plants of Buffalo and vicinity.*).....72
Reinecke, Ottomar, Articles by.....2, 27, 28, 55
"Rock City," Catt. Co., its elevation, plants, etc. (*Plants of Buffalo and vicinity.*).....70
Riley, Charles V., mentioned. *David S Kellicott*.....47
Robinson, Coleman T., mentioned. *C. H. Fernald*.....54
St. Lawrence River, temperature at its mouth. (*Plants of Buffalo and vicinity.*).....70
St. Louis, City of, its occasional winter temperature. (*Plants of Buffalo and vicinity.*).....67
Salamanca, Catt. Co., its elevation, climate and plants. (*Plants of Buffalo and vicinity.*).....67, 70
Salix, a large genus at Buffalo. (*Plants of Buffalo and vicinity,*).....73
nigra, a food-plant of Cossus Robiniæ. (*Plants of Buffalo and vicinity.*).....30
Saperda mœsta, mentioned. *David S. Kellicott*.....62
Sarracenia purpurea, at Point Abino, Ont. (*Plants of Buffalo and vicinity,*).82
Saxifraga azoides, at Portage, Wyom. Co. (*Plants of Buffalo and vicinity.*).....70, 71

PAGE.
Saxifraga Virginiensis, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*)....72
Scheuchzeria palustris, at Hanover, Chaut. Co. (*Plants of Buffalo and vicinity.*)....72
Scirpus Clintonii, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).72
Seiurus aurocapillus, its ventriloquilism. *E. E. Fish*....25
Smerinthus modesta, its larva described. *David S. Kellicott*....29
Solidago, a large genus at Buffalo. (*Plants of Buffalo and vicinity.*)....73
altissima, a food-plant of Lioptilus Kellicottii. *David S. Kellicott*. 51
Sphagnous Swamps near Buffalo, mentioned. (*Plants of Buffalo and vicinity.*)....71, 72
Spizella pusilla, its ventriloquial powers. *E. E. Fish*....25
Spongilla asperrima, described. *Henry Mills*....57
fragilis, described. *Henry Mills*....58, 59
Carteri, mentioned. *Henry Mills*....60
lacustris, mentioned. *Henry Mills*....60
Ottawaensis, a Buffalo sponge. *Henry Mills*....59
tubisperma, n. s, described. *Henry Mills*....58, 59
Spongillæ of Buffalo, Notes on the. *Henry Mills*....57
Spongiophaga, Carter's new species, considered. *Henry Mills*.... 59
Sisymbrium Thaliana, a plant of Point Abino. (*Plants of Buffalo and vicinity.*)....71
Staphylea trifolia, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).72
Stanard, Walter W., mentioned. *David S. Kellicott*....61
Stellaria borealis, at Machias, Catt. Co. (*Plants of Buffalo and vicinity.*)....72
Thyreus Abbottii, identified at Buffalo. *David S. Kellicott*.... .31
Tilia Americana, formerly very abundant at Buffalo. (*Plants of Buffalo and vicinity.*)....73
Tortricid, A new. *C. H. Fernald*....53
Torrey, Dr. John, receives Buffalo plants from Dr. Kinnicutt. (*Plants of Buffalo and vicinity.*)....65
Trifolium pratense, a food-plant of Hylesinus Trifolii. *David S. Kellicott*...29
Triplasis purpurea, a lake-shore plant. (*Plants of Buffalo and vicinity.*)....71
Tsuga Canadensis, formerly very abundant at Buffalo. (*Plants of Buffalo and vicinity.*)....73
Ulmus racemosa, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*).73
Utricularia cornuta, at Niagara Falls. (*Plants of Buffalo and vicinity.*)....71
Vaccinium stamineum, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*)....72
Vancouver's Island, temperature of. (*Plants of Buffalo and vicinity.*)....70
Vaucheria supporting Clathulina elegans. *David S. Kellicott*....61
Ventriloquial powers of Birds, Notes on the imitative and. *E. E. Fish*....23
Viola, an abundant genus at Buffalo. (*Plants of Buffalo and vicinity.*)....73

PAGE.
Viola palmata, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*)...72
Selkirkii, mentioned. (*Plants of Buffalo and vicinity.*).....70
tenella, at the "Plains," Buffalo. (*Plants of Buffalo and vicinity.*)...72
Vireo olivaceus, its imitative power. *E. E. Fish*.....24
Waterlime Group near Buffalo, Additional Notes on the Fauna of. *Julius Pohlman*.....41
Waterlime Group near Buffalo, On certain Fossils of the. *Julius Pohlman*..17
Watson, Sereno, mentioned. (*Plants of Buffalo and vicinity.*).....75
Wild Ducks, On the Domestication of some of our. *Charles Linden*..... 33
Wilson, Mary L., her list of the Lichens of Buffalo. (*Plants of Buffalo and vicinity.*).....74
Witmer, Tobias, mentioned. *David S. Kellicott*.....30
Witmer, Victor M., mentioned. *David S Kellicott*.....30
Wyoming County, its botany not yet fully explored. (*Plants of Buffalo and vicinity*.....73
Zesch, Frank H., Article by.....2
mentioned. *John C. Le Conte, M. D.*.....28

PLATE I.



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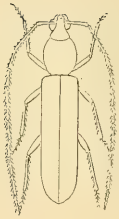

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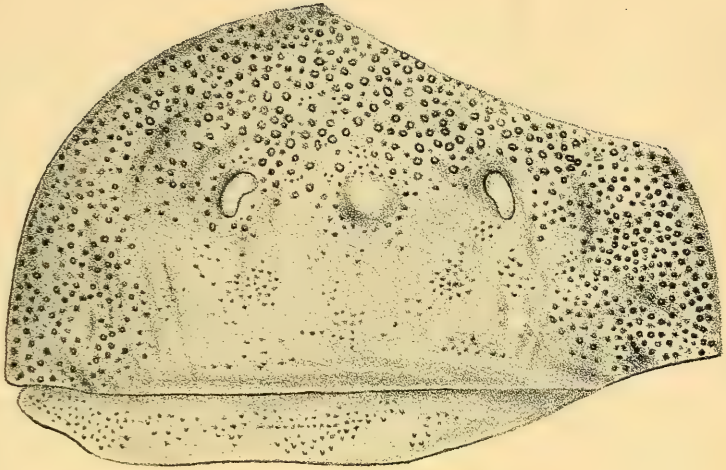

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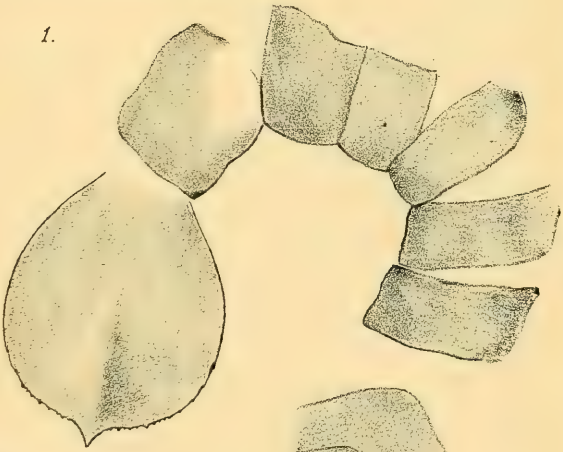

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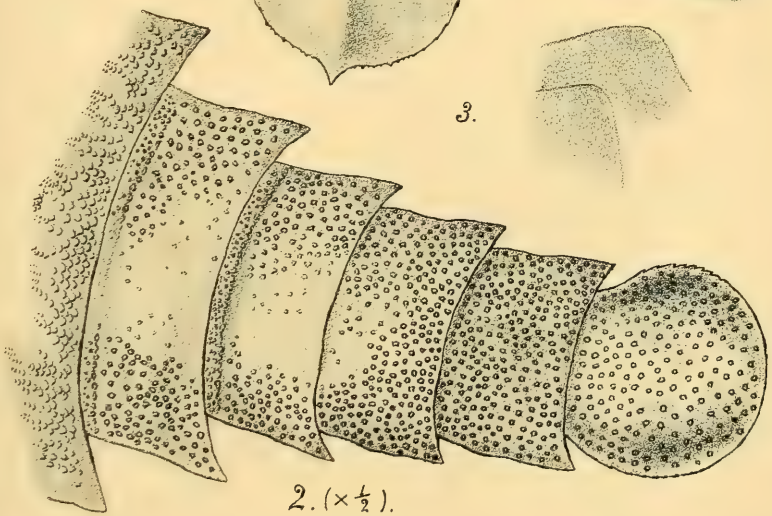

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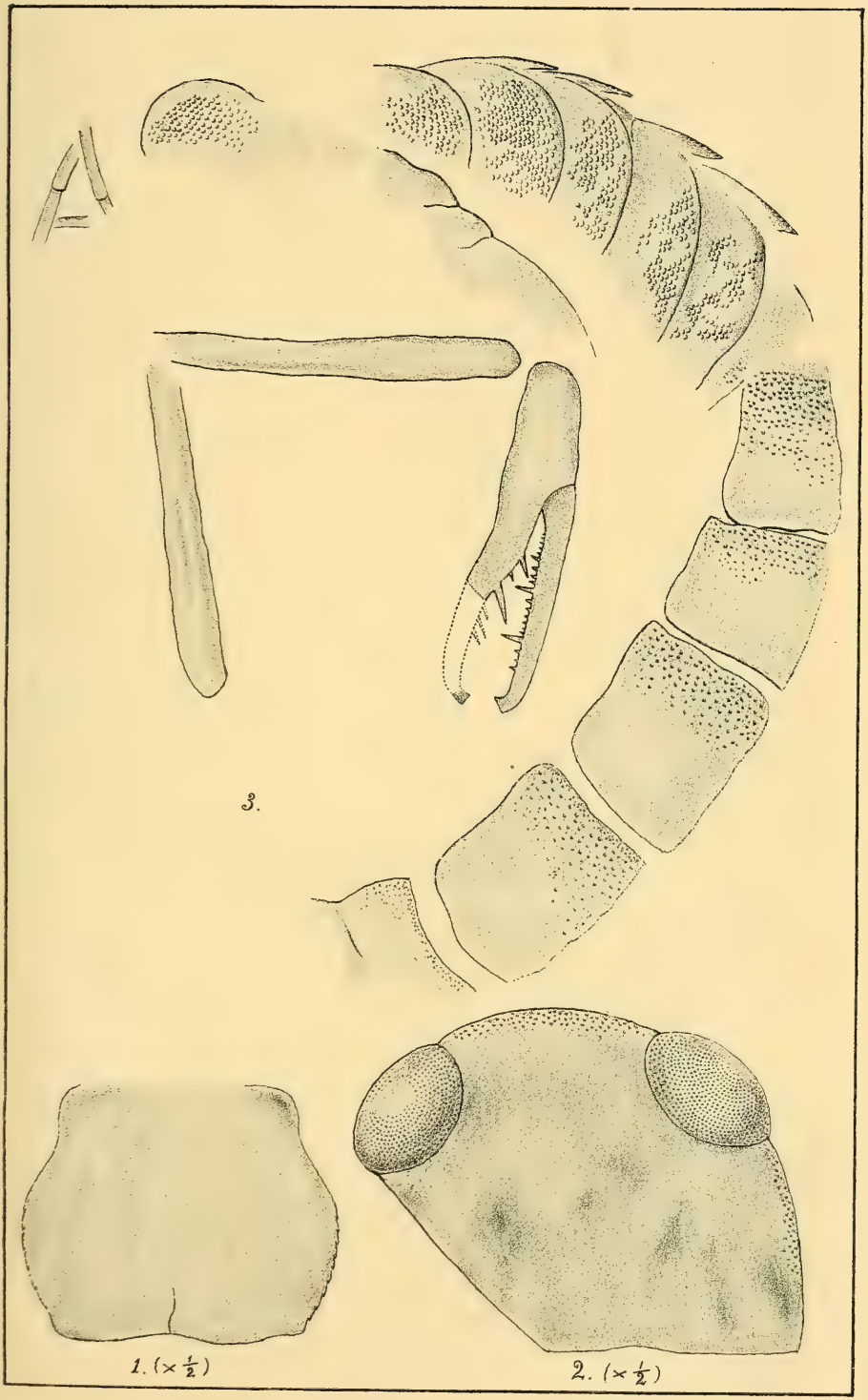

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